AP-111

AGWMR
(2A)

2019

Marathon Petroleum Company LP

APPENDIX H
2019 ANALYTICAL DATA
(ON ATTACHED CD)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 26, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX:

RE: 2019 1st Qtr GW Sampling OrderNo.: 1902313

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/7/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1902313**
Date Reported: **2/26/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-EP2
Project: 2019 1st Qtr GW Sampling
Collection Date: 2/7/2019 9:13:00 AM
Lab ID: 1902313-001
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.2	0.63	1.0		mg/L	1	2/11/2019 2:51:12 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/11/2019 2:51:12 PM	43059
Surr: DNOP	110	0	70-130		%Rec	1	2/11/2019 2:51:12 PM	43059
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.072	0.021	0.050		mg/L	1	2/11/2019 9:28:31 AM	G57625
Surr: BFB	98.6	0	72.8-125		%Rec	1	2/11/2019 9:28:31 AM	G57625
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.26	0.0032	0.010		mg/L	5	2/11/2019 2:22:35 PM	A57631
Beryllium	ND	0.0014	0.010		mg/L	5	2/11/2019 2:22:35 PM	A57631
Cadmium	ND	0.0028	0.010		mg/L	5	2/11/2019 2:22:35 PM	A57631
Chromium	ND	0.0077	0.030		mg/L	5	2/11/2019 2:22:35 PM	A57631
Copper	ND	0.0065	0.030		mg/L	5	2/11/2019 2:22:35 PM	A57631
Iron	0.59	0.044	0.10	*	mg/L	5	2/11/2019 2:22:35 PM	A57631
Manganese	0.22	0.0014	0.010	*	mg/L	5	2/11/2019 2:22:35 PM	A57631
Silver	ND	0.0047	0.025		mg/L	5	2/11/2019 2:22:35 PM	A57631
Zinc	0.025	0.011	0.050	J	mg/L	5	2/11/2019 2:22:35 PM	A57631
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.28	0.00065	0.0020		mg/L	1	2/14/2019 4:41:52 PM	43134
Beryllium	ND	0.00028	0.0020		mg/L	1	2/14/2019 4:41:52 PM	43134
Cadmium	ND	0.00074	0.0020		mg/L	1	2/14/2019 4:41:52 PM	43134
Chromium	0.0021	0.0015	0.0060	J	mg/L	1	2/14/2019 4:41:52 PM	43134
Copper	0.013	0.0041	0.0060		mg/L	1	2/14/2019 4:41:52 PM	43134
Iron	0.76	0.044	0.10	*	mg/L	5	2/14/2019 4:48:22 PM	43134
Manganese	0.23	0.00029	0.0020	*	mg/L	1	2/14/2019 4:41:52 PM	43134
Silver	0.0051	0.0014	0.0050		mg/L	1	2/14/2019 4:41:52 PM	43134
Zinc	0.018	0.0058	0.010		mg/L	1	2/14/2019 4:41:52 PM	43134
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.0014	0.0010	0.0050	J	mg/L	5	2/14/2019 2:15:54 PM	C57720
Arsenic	0.0074	0.000068	0.0010		mg/L	1	2/14/2019 1:05:53 PM	C57720
Lead	ND	0.000047	0.00050		mg/L	1	2/14/2019 1:05:53 PM	C57720
Selenium	0.011	0.00020	0.0010		mg/L	1	2/14/2019 1:05:53 PM	C57720
Thallium	ND	0.000032	0.00050		mg/L	1	2/14/2019 1:05:53 PM	C57720
Uranium	0.0055	0.000030	0.00050		mg/L	1	2/14/2019 1:05:53 PM	C57720
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0020	0.010		mg/L	10	2/19/2019 8:58:18 PM	43134
Arsenic	0.0055	0.0031	0.010	J	mg/L	10	2/19/2019 8:58:18 PM	43134
Lead	ND	0.00047	0.0050		mg/L	10	2/19/2019 8:58:18 PM	43134

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-EP2
Project: 2019 1st Qtr GW Sampling
Collection Date: 2/7/2019 9:13:00 AM
Lab ID: 1902313-001
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: METALS							Analyst: **pmf**	
Selenium	0.0095	0.0048	0.010	J	mg/L	10	2/19/2019 8:58:18 PM	43134
Thallium	ND	0.00052	0.0050		mg/L	10	2/19/2019 8:58:18 PM	43134
Uranium	0.0057	0.00085	0.0050		mg/L	10	2/19/2019 8:58:18 PM	43134
EPA METHOD 245.1: MERCURY							Analyst: **DBK**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	2/13/2019 11:41:13 AM	43101
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	150	2.0	2.0		mg/L	1	2/13/2019 2:07:00 PM	43054
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	15	0.17	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Toluene	8.9	0.17	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Ethylbenzene	0.28	0.22	1.0	J	µg/L	1	2/11/2019 12:50:28 PM	A57627
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Naphthalene	ND	0.29	2.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Acetone	530	3.8	50		µg/L	5	2/9/2019 12:49:02 AM	W5758
Bromobenzene	ND	0.32	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Bromoform	ND	0.32	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Bromomethane	ND	0.27	3.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
2-Butanone	16	1.4	10		µg/L	1	2/11/2019 12:50:28 PM	A57627
Carbon disulfide	1.2	0.39	10	J	µg/L	1	2/11/2019 12:50:28 PM	A57627
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Chloroethane	ND	0.16	2.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Chloroform	ND	0.24	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Chloromethane	ND	0.32	3.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Dibromomethane	ND	0.32	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627

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

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-EP2
Project: 2019 1st Qtr GW Sampling
Collection Date: 2/7/2019 9:13:00 AM
Lab ID: 1902313-001
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
2-Hexanone	ND	0.91	10		µg/L	1	2/11/2019 12:50:28 PM	A57627
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/11/2019 12:50:28 PM	A57627
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Styrene	ND	0.25	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/11/2019 12:50:28 PM	A57627
Xylenes, Total	1.7	0.64	1.5		µg/L	1	2/11/2019 12:50:28 PM	A57627
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	2/11/2019 12:50:28 PM	A57627
Surr: 4-Bromofluorobenzene	93.9	0	70-130		%Rec	1	2/11/2019 12:50:28 PM	A57627
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	2/11/2019 12:50:28 PM	A57627
Surr: Toluene-d8	104	0	70-130		%Rec	1	2/11/2019 12:50:28 PM	A57627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-EP2
Project: 2019 1st Qtr GW Sampling
Collection Date: 2/7/2019 9:13:00 AM
Lab ID: 1902313-001
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	3550	40.0	40.0	*D	mg/L	1	2/11/2019 4:46:00 PM	43070

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

Qualifiers:

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

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	495		10.0	1	02/13/2019 15:26	WG1236259

Method Blank (MB)

(MB) R3383483-1 02/13/19 15:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1068946-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1068946-01 02/13/19 15:23 • (DUP) R3383483-3 02/13/19 15:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	17.7	19.0	1	6.71		20

L1069322-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1069322-01 02/13/19 15:26 • (DUP) R3383483-6 02/13/19 15:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	29.9	30.5	1	1.82		20

Laboratory Control Sample (LCS)

(LCS) R3383483-2 02/13/19 15:22

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	232	105	90.0-110	

L1069303-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1069303-01 02/13/19 15:24 • (MS) R3383483-4 02/13/19 15:25 • (MSD) R3383483-5 02/13/19 15:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	ND	425	427	104	104	1	80.0-120			0.355	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **MB-43134** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **43134** RunNo: **57728**

Prep Date: **2/13/2019** Analysis Date: **2/14/2019** SeqNo: **1932007** Units: **mg/L**

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

Sample ID: **LLLCS-43134** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **43134** RunNo: **57728**

Prep Date: **2/13/2019** Analysis Date: **2/14/2019** SeqNo: **1932009** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	107	50	150			
Cadmium	0.0019	0.0020	0.002000	0	97.1	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0078	0.0060	0.006000	0	129	50	150			
Iron	0.020	0.020	0.02000	0	98.8	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0052	0.0050	0.005000	0	103	50	150			
Zinc	0.0074	0.010	0.005000	0	148	50	150			J

Sample ID: **LCS-43134** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **43134** RunNo: **57728**

Prep Date: **2/13/2019** Analysis Date: **2/14/2019** SeqNo: **1932011** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.8	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.48	0.0060	0.5000	0	95.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.48	0.020	0.5000	0	96.4	85	115			
Manganese	0.48	0.0020	0.5000	0	95.2	85	115			
Silver	0.098	0.0050	0.1000	0	97.9	85	115			
Zinc	0.47	0.010	0.5000	0	94.4	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **1902313-001EMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **STP1-EP2** Batch ID: **43134** RunNo: **57728**

Prep Date: **2/13/2019** Analysis Date: **2/14/2019** SeqNo: **1932126** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.77	0.0020	0.5000	0.2847	96.5	70	130			
Beryllium	0.53	0.0020	0.5000	0	107	70	130			
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Chromium	0.46	0.0060	0.5000	0.002092	91.9	70	130			
Copper	0.55	0.0060	0.5000	0.01265	108	70	130			
Manganese	0.72	0.0020	0.5000	0.2299	98.3	70	130			
Silver	0.11	0.0050	0.1000	0.005089	106	70	130			
Zinc	0.50	0.010	0.5000	0.01791	96.2	70	130			

Sample ID: **1902313-001EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **STP1-EP2** Batch ID: **43134** RunNo: **57728**

Prep Date: **2/13/2019** Analysis Date: **2/14/2019** SeqNo: **1932127** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.74	0.0020	0.5000	0.2847	92.0	70	130	2.99	20	
Beryllium	0.52	0.0020	0.5000	0	103	70	130	3.40	20	
Cadmium	0.49	0.0020	0.5000	0	98.2	70	130	3.35	20	
Chromium	0.45	0.0060	0.5000	0.002092	89.0	70	130	3.12	20	
Copper	0.54	0.0060	0.5000	0.01265	106	70	130	2.58	20	
Manganese	0.70	0.0020	0.5000	0.2299	94.7	70	130	2.52	20	
Silver	0.11	0.0050	0.1000	0.005089	101	70	130	3.93	20	
Zinc	0.48	0.010	0.5000	0.01791	92.8	70	130	3.49	20	

Sample ID: **1902313-001EMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **STP1-EP2** Batch ID: **43134** RunNo: **57728**

Prep Date: **2/13/2019** Analysis Date: **2/14/2019** SeqNo: **1932129** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.3	0.10	0.5000	0.7640	109	70	130			

Sample ID: **1902313-001EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **STP1-EP2** Batch ID: **43134** RunNo: **57728**

Prep Date: **2/13/2019** Analysis Date: **2/14/2019** SeqNo: **1932130** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.3	0.10	0.5000	0.7640	108	70	130	0.565	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **PBW** Batch ID: **A57631** RunNo: **57631**

Prep Date: Analysis Date: **2/11/2019** SeqNo: **1928469** Units: **mg/L**

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

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **A57631** RunNo: **57631**

Prep Date: Analysis Date: **2/11/2019** SeqNo: **1928470** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	79.0	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	88.2	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	82.8	50	150			J
Chromium	0.0069	0.0060	0.006000	0	115	50	150			
Copper	0.0068	0.0060	0.006000	0	113	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0020	0.0020	0.002000	0	97.9	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Zinc	0.0061	0.010	0.005000	0	122	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **LCSW** Batch ID: **A57631** RunNo: **57631**

Prep Date: Analysis Date: **2/11/2019** SeqNo: **1928471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.8	85	115			
Beryllium	0.51	0.0020	0.5000	0	103	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.8	85	115			
Copper	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.49	0.010	0.5000	0	98.8	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **MB-43134** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **43134** RunNo: **57756**

Prep Date: **2/13/2019** Analysis Date: **2/15/2019** SeqNo: **1933526** Units: **mg/L**

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

Sample ID: **MSLLCS-43134** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **43134** RunNo: **57756**

Prep Date: Analysis Date: **2/15/2019** SeqNo: **1933528** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	109	50	150			
Arsenic	0.00098	0.0010	0.001000	0	98.2	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Selenium	0.00089	0.0010	0.001000	0	88.9	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	92.1	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.6	50	150			J

Sample ID: **MSLCS-43134** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **43134** RunNo: **57756**

Prep Date: **2/13/2019** Analysis Date: **2/15/2019** SeqNo: **1933530** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	102	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	96.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.0	85	115			
Thallium	0.012	0.00050	0.01250	0	96.2	85	115			
Uranium	0.012	0.00050	0.01250	0	98.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**
26-Feb-19

Client: MARATHON GALLUP
Project: 2019 1st Qtr GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C57720** RunNo: **57720**
Prep Date: Analysis Date: **2/14/2019** SeqNo: **1931427** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00036	0.0010								J
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	0.00021	0.00050								J

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C57720** RunNo: **57720**
Prep Date: Analysis Date: **2/14/2019** SeqNo: **1931428** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	105	50	150			
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Selenium	0.0010	0.0010	0.001000	0	101	50	150			
Thallium	0.00050	0.00050	0.0005000	0	100	50	150			J
Uranium	0.00058	0.00050	0.0005000	0	115	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C57720** RunNo: **57720**
Prep Date: Analysis Date: **2/14/2019** SeqNo: **1931429** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	100	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.9	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.8	85	115			
Thallium	0.012	0.00050	0.01250	0	99.0	85	115			
Uranium	0.012	0.00050	0.01250	0	94.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **MB-43101**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **43101**	RunNo: **57679**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1930398** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000068	0.00020								J

Sample ID: **LCS-43101**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **43101**	RunNo: **57679**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1930399** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.3	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **LCS-43059**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.8	71.8	135			
Surr: DNOP	0.55		0.5000		110	70	130			

Sample ID: **MB-43059**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	70	130			

Sample ID: **1902313-001CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1-EP2**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	1.200	90.3	68.1	137			
Surr: DNOP	0.56		0.5000		112	70	130			

Sample ID: **1902313-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1-EP2**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928287** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	1.200	91.6	68.1	137	1.08	20	
Surr: DNOP	0.53		0.5000		106	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928264** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		100	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	77.7	130			
Surr: BFB	25		20.00		123	72.8	125			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W57585**	RunNo: **57585**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927109** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acetone	ND	10								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.6	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W57585**	RunNo: **57585**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927110** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928373** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**
26-Feb-19

Client: MARATHON GALLUP
Project: 2019 1st Qtr GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928373** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928373** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928374** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.1	70	130			
Toluene	18	1.0	20.00	0	90.1	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.5	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	79.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.9	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **MB-43054**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **43054**	RunNo: **57704**							
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931613**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-43054**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **43054**	RunNo: **57704**							
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931614**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	120	2.0	198.0	0	62.6	84.6	115.4			S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902313**

26-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st Qtr GW Sampling

Sample ID: **MB-43070**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **43070**	RunNo: **57620**
Prep Date: **2/10/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-43070**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **43070**	RunNo: **57620**
Prep Date: **2/10/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1902313** RcptNo: **1**

Received By: **Isaiah Ortiz** **2/7/2019 12:15:00 PM** I-OK

Completed By: **Victoria Zellar** **2/7/2019 2:15:11 PM** Victoria Zellar labelled by TWN 2-7-19

Reviewed By: DAD 2/7/19 @ 15:20

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)

Adjusted? N/A

Checked by: TWN

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.5	Good	Yes			
2	1.8	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard Rush_____

Project Name:

2019 1ST QTR GW SAMPLING

Project #:

STP1-EP2

Project Manager:

BRIAN MOORE

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.5 ~ 1.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1902313	Analysis Request: 8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	Cyanide	8021	BOD	COD	TDS						Air Bubbles (Y or N)
2/7/2019	0913	AQUEOUS	STP1-EP2	MISC	MISC	-001	X	X		X	X				X	X	X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/7/19	1000		courier	2/7/19	1215
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	495		10.0	1	02/13/2019 15:26	WG1236259

Method Blank (MB)

(MB) R3383483-1 02/13/19 15:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1068946-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1068946-01 02/13/19 15:23 • (DUP) R3383483-3 02/13/19 15:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	17.7	19.0	1	6.71		20

L1069322-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1069322-01 02/13/19 15:26 • (DUP) R3383483-6 02/13/19 15:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	29.9	30.5	1	1.82		20

Laboratory Control Sample (LCS)

(LCS) R3383483-2 02/13/19 15:22

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	232	105	90.0-110	

L1069303-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1069303-01 02/13/19 15:24 • (MS) R3383483-4 02/13/19 15:25 • (MSD) R3383483-5 02/13/19 15:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	ND	425	427	104	104	1	80.0-120			0.355	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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

February 28, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX:

RE: 2019 1ST QTR GW SAMPLES OrderNo.: 1902322

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/7/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 7:00:00 AM
Lab ID: 1902322-001 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Toluene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Ethylbenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Naphthalene	ND	2.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1-Methylnaphthalene	ND	4.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
2-Methylnaphthalene	ND	4.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Acetone	ND	10		µg/L	1	2/11/2019 1:49:18 PM	A57627
Bromobenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Bromodichloromethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Bromoform	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Bromomethane	ND	3.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
2-Butanone	ND	10		µg/L	1	2/11/2019 1:49:18 PM	A57627
Carbon disulfide	ND	10		µg/L	1	2/11/2019 1:49:18 PM	A57627
Carbon Tetrachloride	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Chlorobenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Chloroethane	ND	2.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Chloroform	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Chloromethane	ND	3.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
2-Chlorotoluene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
4-Chlorotoluene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
cis-1,2-DCE	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Dibromochloromethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Dibromomethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,1-Dichloroethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,1-Dichloroethene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2-Dichloropropane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,3-Dichloropropane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
2,2-Dichloropropane	ND	2.0		µg/L	1	2/11/2019 1:49:18 PM	A57627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 7:00:00 AM
Lab ID: 1902322-001 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Hexachlorobutadiene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
2-Hexanone	ND	10		µg/L	1	2/11/2019 1:49:18 PM	A57627
Isopropylbenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
4-Isopropyltoluene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
4-Methyl-2-pentanone	ND	10		µg/L	1	2/11/2019 1:49:18 PM	A57627
Methylene Chloride	ND	3.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
n-Butylbenzene	ND	3.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
n-Propylbenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
sec-Butylbenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Styrene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
tert-Butylbenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
trans-1,2-DCE	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Trichlorofluoromethane	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Vinyl chloride	ND	1.0		µg/L	1	2/11/2019 1:49:18 PM	A57627
Xylenes, Total	ND	1.5		µg/L	1	2/11/2019 1:49:18 PM	A57627
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	2/11/2019 1:49:18 PM	A57627
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	2/11/2019 1:49:18 PM	A57627
Surr: Dibromofluoromethane	105	70-130		%Rec	1	2/11/2019 1:49:18 PM	A57627
Surr: Toluene-d8	100	70-130		%Rec	1	2/11/2019 1:49:18 PM	A57627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: TRIP BLANK
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 7:00:00 AM
Lab ID: 1902322-002 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	2/11/2019 9:51:11 AM	G57625
Surr: BFB	98.3	72.8-125		%Rec	1	2/11/2019 9:51:11 AM	G57625
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Toluene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Ethylbenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Naphthalene	ND	2.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1-Methylnaphthalene	ND	4.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
2-Methylnaphthalene	ND	4.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Acetone	ND	10		µg/L	1	2/11/2019 2:18:48 PM	A57627
Bromobenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Bromodichloromethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Bromoform	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Bromomethane	ND	3.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
2-Butanone	ND	10		µg/L	1	2/11/2019 2:18:48 PM	A57627
Carbon disulfide	ND	10		µg/L	1	2/11/2019 2:18:48 PM	A57627
Carbon Tetrachloride	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Chlorobenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Chloroethane	ND	2.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Chloroform	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Chloromethane	ND	3.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
2-Chlorotoluene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
4-Chlorotoluene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
cis-1,2-DCE	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Dibromochloromethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Dibromomethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,1-Dichloroethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,1-Dichloroethene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: TRIP BLANK
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 7:00:00 AM
Lab ID: 1902322-002 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,3-Dichloropropane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
2,2-Dichloropropane	ND	2.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,1-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Hexachlorobutadiene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
2-Hexanone	ND	10		µg/L	1	2/11/2019 2:18:48 PM	A57627
Isopropylbenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
4-Isopropyltoluene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
4-Methyl-2-pentanone	ND	10		µg/L	1	2/11/2019 2:18:48 PM	A57627
Methylene Chloride	ND	3.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
n-Butylbenzene	ND	3.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
n-Propylbenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
sec-Butylbenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Styrene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
tert-Butylbenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
trans-1,2-DCE	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Trichlorofluoromethane	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Vinyl chloride	ND	1.0		µg/L	1	2/11/2019 2:18:48 PM	A57627
Xylenes, Total	ND	1.5		µg/L	1	2/11/2019 2:18:48 PM	A57627
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	2/11/2019 2:18:48 PM	A57627
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	2/11/2019 2:18:48 PM	A57627
Surr: Dibromofluoromethane	104	70-130		%Rec	1	2/11/2019 2:18:48 PM	A57627
Surr: Toluene-d8	105	70-130		%Rec	1	2/11/2019 2:18:48 PM	A57627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:48:00 PM
Lab ID: 1902322-003 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Antimony	ND	0.0010		mg/L	1	2/14/2019 1:22:46 PM	C57720
Arsenic	0.0039	0.0010		mg/L	1	2/14/2019 1:22:46 PM	C57720
Lead	0.0082	0.00050		mg/L	1	2/14/2019 1:22:46 PM	C57720
Selenium	ND	0.0010		mg/L	1	2/14/2019 1:22:46 PM	C57720
Thallium	ND	0.00050		mg/L	1	2/14/2019 1:22:46 PM	C57720
Uranium	0.058	0.0025	*	mg/L	5	2/14/2019 2:18:18 PM	C57720
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	ND	0.50		mg/L	5	2/7/2019 7:32:59 PM	R57567
Chloride	250	10		mg/L	20	2/7/2019 7:45:23 PM	R57567
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	2/7/2019 7:32:59 PM	R57567
Bromide	2.2	0.50		mg/L	5	2/7/2019 7:32:59 PM	R57567
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	2/7/2019 7:32:59 PM	R57567
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	2/7/2019 7:32:59 PM	R57567
Sulfate	34	2.5		mg/L	5	2/7/2019 7:32:59 PM	R57567
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**bcv**
Barium	0.16	0.0020		mg/L	1	2/11/2019 2:38:59 PM	B57631
Beryllium	ND	0.0020		mg/L	1	2/11/2019 2:38:59 PM	B57631
Cadmium	ND	0.0020		mg/L	1	2/11/2019 2:38:59 PM	B57631
Calcium	60	1.0		mg/L	1	2/11/2019 2:38:59 PM	B57631
Chromium	ND	0.0060		mg/L	1	2/11/2019 2:38:59 PM	B57631
Copper	ND	0.0060		mg/L	1	2/11/2019 2:38:59 PM	B57631
Iron	0.47	0.020	*	mg/L	1	2/11/2019 2:38:59 PM	B57631
Magnesium	16	1.0		mg/L	1	2/11/2019 2:38:59 PM	B57631
Manganese	1.4	0.010	*	mg/L	5	2/11/2019 2:41:18 PM	B57631
Potassium	ND	1.0		mg/L	1	2/11/2019 2:38:59 PM	B57631
Silver	ND	0.0050		mg/L	1	2/11/2019 2:38:59 PM	B57631
Sodium	390	5.0		mg/L	5	2/11/2019 2:41:18 PM	B57631
Zinc	0.026	0.010		mg/L	1	2/11/2019 2:38:59 PM	B57631
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.28	0.0020		mg/L	1	2/15/2019 9:40:39 AM	43165
Beryllium	ND	0.0020		mg/L	1	2/15/2019 9:40:39 AM	43165
Cadmium	ND	0.0020		mg/L	1	2/15/2019 9:40:39 AM	43165
Chromium	ND	0.0060		mg/L	1	2/15/2019 9:40:39 AM	43165
Copper	0.031	0.0060		mg/L	1	2/15/2019 9:40:39 AM	43165
Iron	2.7	0.10	*	mg/L	5	2/18/2019 3:46:14 PM	43191
Manganese	1.5	0.010	*	mg/L	5	2/15/2019 9:49:16 AM	43165
Silver	ND	0.0050		mg/L	1	2/15/2019 9:40:39 AM	43165
Zinc	ND	0.010		mg/L	1	2/18/2019 3:44:15 PM	43191

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:48:00 PM
Lab ID: 1902322-003 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **pmf**	
Antimony	ND	0.0010		mg/L	1	2/18/2019 6:01:23 PM	43165
Arsenic	0.0035	0.0010		mg/L	1	2/19/2019 4:59:19 PM	43165
Lead	0.013	0.00050		mg/L	1	2/18/2019 6:01:23 PM	43165
Selenium	ND	0.0010		mg/L	1	2/19/2019 4:59:19 PM	43165
Thallium	ND	0.00050		mg/L	1	2/18/2019 6:01:23 PM	43165
Uranium	0.053	0.0025	*	mg/L	5	2/19/2019 5:01:15 PM	43165
EPA METHOD 245.1: MERCURY						Analyst: **pmf**	
Mercury	ND	0.00020		mg/L	1	2/19/2019 12:35:58 PM	43220
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **lrm**	
Diesel Range Organics (DRO)	1.7	1.0		mg/L	1	2/11/2019 4:04:13 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/11/2019 4:04:13 PM	43059
Surr: DNOP	100	70-130		%Rec	1	2/11/2019 4:04:13 PM	43059
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.3	0.050		mg/L	1	2/11/2019 10:13:50 AM	G57625
Surr: BFB	108	72.8-125		%Rec	1	2/11/2019 10:13:50 AM	G57625
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Acenaphthylene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Aniline	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Anthracene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Azobenzene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Benz(a)anthracene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Benzo(a)pyrene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Benzo(b)fluoranthene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Benzo(g,h,i)perylene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Benzo(k)fluoranthene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Benzoic acid	ND	20		µg/L	1	2/13/2019 8:57:42 PM	43051
Benzyl alcohol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Bis(2-chloroethyl)ether	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
4-Bromophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Butyl benzyl phthalate	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Carbazole	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
4-Chloro-3-methylphenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
4-Chloroaniline	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:48:00 PM
Lab ID: 1902322-003 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Chloronaphthalene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2-Chlorophenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Chrysene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Di-n-butyl phthalate	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Di-n-octyl phthalate	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Dibenz(a,h)anthracene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Dibenzofuran	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
1,2-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
1,3-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
1,4-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
3,3´-Dichlorobenzidine	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Diethyl phthalate	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Dimethyl phthalate	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2,4-Dichlorophenol	ND	20		µg/L	1	2/13/2019 8:57:42 PM	43051
2,4-Dimethylphenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	2/13/2019 8:57:42 PM	43051
2,4-Dinitrophenol	ND	20		µg/L	1	2/13/2019 8:57:42 PM	43051
2,4-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2,6-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Fluoranthene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Fluorene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Hexachlorobenzene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Hexachlorobutadiene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Hexachlorocyclopentadiene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Hexachloroethane	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Isophorone	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
1-Methylnaphthalene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2-Methylnaphthalene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2-Methylphenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
3+4-Methylphenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
N-Nitrosodimethylamine	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
N-Nitrosodiphenylamine	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Naphthalene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2-Nitroaniline	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
3-Nitroaniline	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
4-Nitroaniline	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:48:00 PM
Lab ID: 1902322-003 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Nitrobenzene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2-Nitrophenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
4-Nitrophenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Pentachlorophenol	ND	20		µg/L	1	2/13/2019 8:57:42 PM	43051
Phenanthrene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Phenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Pyrene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Pyridine	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
1,2,4-Trichlorobenzene	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2,4,5-Trichlorophenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
2,4,6-Trichlorophenol	ND	10		µg/L	1	2/13/2019 8:57:42 PM	43051
Surr: 2-Fluorophenol	44.8	15-74.1		%Rec	1	2/13/2019 8:57:42 PM	43051
Surr: Phenol-d5	36.8	15-59.8		%Rec	1	2/13/2019 8:57:42 PM	43051
Surr: 2,4,6-Tribromophenol	61.0	22.1-112		%Rec	1	2/13/2019 8:57:42 PM	43051
Surr: Nitrobenzene-d5	61.9	33.2-94		%Rec	1	2/13/2019 8:57:42 PM	43051
Surr: 2-Fluorobiphenyl	53.5	34-90.9		%Rec	1	2/13/2019 8:57:42 PM	43051
Surr: 4-Terphenyl-d14	44.8	15-149		%Rec	1	2/13/2019 8:57:42 PM	43051
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	73	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Toluene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Ethylbenzene	20	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Methyl tert-butyl ether (MTBE)	1600	20		µg/L	20	2/11/2019 2:48:15 PM	A57627
1,2,4-Trimethylbenzene	15	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Naphthalene	ND	4.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1-Methylnaphthalene	ND	8.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
2-Methylnaphthalene	ND	8.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Acetone	ND	20		µg/L	2	2/11/2019 3:17:45 PM	A57627
Bromobenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Bromodichloromethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Bromoform	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Bromomethane	ND	6.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
2-Butanone	ND	20		µg/L	2	2/11/2019 3:17:45 PM	A57627
Carbon disulfide	ND	20		µg/L	2	2/11/2019 3:17:45 PM	A57627
Carbon Tetrachloride	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Chlorobenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Chloroethane	ND	4.0		µg/L	2	2/11/2019 3:17:45 PM	A57627

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:48:00 PM
Lab ID: 1902322-003 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chloroform	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Chloromethane	ND	6.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
2-Chlorotoluene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
4-Chlorotoluene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
cis-1,2-DCE	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Dibromochloromethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Dibromomethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2-Dichlorobenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,3-Dichlorobenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,4-Dichlorobenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Dichlorodifluoromethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,1-Dichloroethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,1-Dichloroethene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2-Dichloropropane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,3-Dichloropropane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
2,2-Dichloropropane	ND	4.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,1-Dichloropropene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Hexachlorobutadiene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
2-Hexanone	ND	20		µg/L	2	2/11/2019 3:17:45 PM	A57627
Isopropylbenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
4-Isopropyltoluene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
4-Methyl-2-pentanone	ND	20		µg/L	2	2/11/2019 3:17:45 PM	A57627
Methylene Chloride	ND	6.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
n-Butylbenzene	ND	6.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
n-Propylbenzene	2.3	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
sec-Butylbenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Styrene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
tert-Butylbenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
trans-1,2-DCE	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,1,1-Trichloroethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,1,2-Trichloroethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:48:00 PM
Lab ID: 1902322-003 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Trichloroethene (TCE)	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Trichlorofluoromethane	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
1,2,3-Trichloropropane	ND	4.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Vinyl chloride	ND	2.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Xylenes, Total	ND	3.0		µg/L	2	2/11/2019 3:17:45 PM	A57627
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	2	2/11/2019 3:17:45 PM	A57627
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	2	2/11/2019 3:17:45 PM	A57627
Surr: Dibromofluoromethane	108	70-130		%Rec	2	2/11/2019 3:17:45 PM	A57627
Surr: Toluene-d8	99.9	70-130		%Rec	2	2/11/2019 3:17:45 PM	A57627

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 2:30:00 PM
Lab ID: 1902322-004 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Antimony	ND	0.0010		mg/L	1	2/14/2019 1:25:10 PM	C57720
Arsenic	0.0053	0.0010		mg/L	1	2/14/2019 1:25:10 PM	C57720
Lead	ND	0.00050		mg/L	1	2/14/2019 1:25:10 PM	C57720
Selenium	ND	0.0010		mg/L	1	2/14/2019 1:25:10 PM	C57720
Thallium	ND	0.00050		mg/L	1	2/14/2019 1:25:10 PM	C57720
Uranium	0.0071	0.00050		mg/L	1	2/14/2019 1:25:10 PM	C57720
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	ND	0.50		mg/L	5	2/7/2019 7:57:47 PM	R57567
Chloride	270	10		mg/L	20	2/7/2019 8:10:11 PM	R57567
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	2/7/2019 7:57:47 PM	R57567
Bromide	1.1	0.50		mg/L	5	2/7/2019 7:57:47 PM	R57567
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	2/7/2019 7:57:47 PM	R57567
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	2/7/2019 7:57:47 PM	R57567
Sulfate	3.0	2.5		mg/L	5	2/7/2019 7:57:47 PM	R57567
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**bcv**
Barium	0.54	0.0020		mg/L	1	2/11/2019 2:43:26 PM	B57631
Beryllium	ND	0.0020		mg/L	1	2/11/2019 2:43:26 PM	B57631
Cadmium	ND	0.0020		mg/L	1	2/11/2019 2:43:26 PM	B57631
Calcium	100	5.0		mg/L	5	2/11/2019 2:45:32 PM	B57631
Chromium	ND	0.0060		mg/L	1	2/11/2019 2:43:26 PM	B57631
Copper	ND	0.0060		mg/L	1	2/11/2019 2:43:26 PM	B57631
Iron	4.0	0.10	*	mg/L	5	2/11/2019 2:45:32 PM	B57631
Magnesium	27	1.0		mg/L	1	2/11/2019 2:43:26 PM	B57631
Manganese	3.7	0.010	*	mg/L	5	2/11/2019 2:45:32 PM	B57631
Potassium	ND	1.0		mg/L	1	2/11/2019 2:43:26 PM	B57631
Silver	ND	0.0050		mg/L	1	2/11/2019 2:43:26 PM	B57631
Sodium	350	5.0		mg/L	5	2/11/2019 2:45:32 PM	B57631
Zinc	0.021	0.010		mg/L	1	2/11/2019 2:43:26 PM	B57631
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.58	0.0020		mg/L	1	2/15/2019 9:53:37 AM	43165
Beryllium	ND	0.0020		mg/L	1	2/15/2019 9:53:37 AM	43165
Cadmium	ND	0.0020		mg/L	1	2/15/2019 9:53:37 AM	43165
Chromium	ND	0.0060		mg/L	1	2/15/2019 9:53:37 AM	43165
Copper	ND	0.0060		mg/L	1	2/15/2019 9:53:37 AM	43165
Iron	5.5	0.20	*	mg/L	10	2/18/2019 3:50:29 PM	43191
Manganese	3.8	0.010	*	mg/L	5	2/15/2019 9:55:38 AM	43165
Silver	ND	0.0050		mg/L	1	2/15/2019 9:53:37 AM	43165
Zinc	ND	0.010		mg/L	1	2/15/2019 9:53:37 AM	43165

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 2:30:00 PM
Lab ID: 1902322-004 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **pmf**	
Antimony	ND	0.0010		mg/L	1	2/18/2019 6:05:17 PM	43165
Arsenic	0.0055	0.0010		mg/L	1	2/19/2019 5:03:12 PM	43165
Lead	0.0021	0.00050		mg/L	1	2/18/2019 6:05:17 PM	43165
Selenium	ND	0.0010		mg/L	1	2/19/2019 5:03:12 PM	43165
Thallium	ND	0.00050		mg/L	1	2/18/2019 6:05:17 PM	43165
Uranium	0.0070	0.00050		mg/L	1	2/19/2019 5:03:12 PM	43165
EPA METHOD 245.1: MERCURY						Analyst: **pmf**	
Mercury	ND	0.00020		mg/L	1	2/19/2019 12:38:12 PM	43220
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **lrm**	
Diesel Range Organics (DRO)	2.9	1.0		mg/L	1	2/11/2019 4:28:34 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/11/2019 4:28:34 PM	43059
Surr: DNOP	105	70-130		%Rec	1	2/11/2019 4:28:34 PM	43059
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	28	1.0		mg/L	20	2/11/2019 10:59:07 AM	G57625
Surr: BFB	111	72.8-125		%Rec	20	2/11/2019 10:59:07 AM	G57625
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Acenaphthylene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Aniline	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Anthracene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Azobenzene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Benz(a)anthracene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Benzo(a)pyrene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Benzo(b)fluoranthene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Benzo(g,h,i)perylene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Benzo(k)fluoranthene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Benzoic acid	ND	20		µg/L	1	2/13/2019 9:27:01 PM	43051
Benzyl alcohol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Bis(2-chloroethyl)ether	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
4-Bromophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Butyl benzyl phthalate	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Carbazole	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
4-Chloro-3-methylphenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
4-Chloroaniline	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 2:30:00 PM
Lab ID: 1902322-004 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Chloronaphthalene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2-Chlorophenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Chrysene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Di-n-butyl phthalate	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Di-n-octyl phthalate	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Dibenz(a,h)anthracene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Dibenzofuran	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
1,2-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
1,3-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
1,4-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
3,3´-Dichlorobenzidine	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Diethyl phthalate	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Dimethyl phthalate	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2,4-Dichlorophenol	ND	20		µg/L	1	2/13/2019 9:27:01 PM	43051
2,4-Dimethylphenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	2/13/2019 9:27:01 PM	43051
2,4-Dinitrophenol	ND	20		µg/L	1	2/13/2019 9:27:01 PM	43051
2,4-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2,6-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Fluoranthene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Fluorene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Hexachlorobenzene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Hexachlorobutadiene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Hexachlorocyclopentadiene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Hexachloroethane	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Isophorone	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
1-Methylnaphthalene	16	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2-Methylnaphthalene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2-Methylphenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
3+4-Methylphenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
N-Nitrosodimethylamine	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
N-Nitrosodiphenylamine	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Naphthalene	20	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2-Nitroaniline	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
3-Nitroaniline	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
4-Nitroaniline	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 2:30:00 PM
Lab ID: 1902322-004 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Nitrobenzene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2-Nitrophenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
4-Nitrophenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Pentachlorophenol	ND	20		µg/L	1	2/13/2019 9:27:01 PM	43051
Phenanthrene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Phenol	26	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Pyrene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Pyridine	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
1,2,4-Trichlorobenzene	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2,4,5-Trichlorophenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
2,4,6-Trichlorophenol	ND	10		µg/L	1	2/13/2019 9:27:01 PM	43051
Surr: 2-Fluorophenol	45.2	15-74.1		%Rec	1	2/13/2019 9:27:01 PM	43051
Surr: Phenol-d5	37.1	15-59.8		%Rec	1	2/13/2019 9:27:01 PM	43051
Surr: 2,4,6-Tribromophenol	69.7	22.1-112		%Rec	1	2/13/2019 9:27:01 PM	43051
Surr: Nitrobenzene-d5	60.4	33.2-94		%Rec	1	2/13/2019 9:27:01 PM	43051
Surr: 2-Fluorobiphenyl	55.3	34-90.9		%Rec	1	2/13/2019 9:27:01 PM	43051
Surr: 4-Terphenyl-d14	50.1	15-149		%Rec	1	2/13/2019 9:27:01 PM	43051
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	8600	500		µg/L	500	2/11/2019 4:45:53 PM	A57627
Toluene	560	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Ethylbenzene	660	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Methyl tert-butyl ether (MTBE)	1400	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2,4-Trimethylbenzene	190	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,3,5-Trimethylbenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Naphthalene	ND	100		µg/L	50	2/11/2019 5:15:14 PM	A57627
1-Methylnaphthalene	ND	200		µg/L	50	2/11/2019 5:15:14 PM	A57627
2-Methylnaphthalene	ND	200		µg/L	50	2/11/2019 5:15:14 PM	A57627
Acetone	ND	500		µg/L	50	2/11/2019 5:15:14 PM	A57627
Bromobenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Bromodichloromethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Bromoform	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Bromomethane	ND	150		µg/L	50	2/11/2019 5:15:14 PM	A57627
2-Butanone	ND	500		µg/L	50	2/11/2019 5:15:14 PM	A57627
Carbon disulfide	ND	500		µg/L	50	2/11/2019 5:15:14 PM	A57627
Carbon Tetrachloride	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Chlorobenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Chloroethane	ND	100		µg/L	50	2/11/2019 5:15:14 PM	A57627

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 2:30:00 PM
Lab ID: 1902322-004 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chloroform	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Chloromethane	ND	150		µg/L	50	2/11/2019 5:15:14 PM	A57627
2-Chlorotoluene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
4-Chlorotoluene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
cis-1,2-DCE	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
cis-1,3-Dichloropropene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	2/11/2019 5:15:14 PM	A57627
Dibromochloromethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Dibromomethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2-Dichlorobenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,3-Dichlorobenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,4-Dichlorobenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Dichlorodifluoromethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,1-Dichloroethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,1-Dichloroethene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2-Dichloropropane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,3-Dichloropropane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
2,2-Dichloropropane	ND	100		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,1-Dichloropropene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Hexachlorobutadiene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
2-Hexanone	ND	500		µg/L	50	2/11/2019 5:15:14 PM	A57627
Isopropylbenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
4-Isopropyltoluene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
4-Methyl-2-pentanone	ND	500		µg/L	50	2/11/2019 5:15:14 PM	A57627
Methylene Chloride	ND	150		µg/L	50	2/11/2019 5:15:14 PM	A57627
n-Butylbenzene	ND	150		µg/L	50	2/11/2019 5:15:14 PM	A57627
n-Propylbenzene	61	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
sec-Butylbenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Styrene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
tert-Butylbenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	2/11/2019 5:15:14 PM	A57627
Tetrachloroethene (PCE)	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
trans-1,2-DCE	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
trans-1,3-Dichloropropene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2,3-Trichlorobenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2,4-Trichlorobenzene	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,1,1-Trichloroethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,1,2-Trichloroethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 2:30:00 PM
Lab ID: 1902322-004 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Trichloroethene (TCE)	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Trichlorofluoromethane	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
1,2,3-Trichloropropane	ND	100		µg/L	50	2/11/2019 5:15:14 PM	A57627
Vinyl chloride	ND	50		µg/L	50	2/11/2019 5:15:14 PM	A57627
Xylenes, Total	480	75		µg/L	50	2/11/2019 5:15:14 PM	A57627
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	50	2/11/2019 5:15:14 PM	A57627
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	50	2/11/2019 5:15:14 PM	A57627
Surr: Dibromofluoromethane	105	70-130		%Rec	50	2/11/2019 5:15:14 PM	A57627
Surr: Toluene-d8	103	70-130		%Rec	50	2/11/2019 5:15:14 PM	A57627

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 3:00:00 PM
Lab ID: 1902322-005 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Antimony	ND	0.0010		mg/L	1	2/14/2019 1:32:28 PM	C57720
Arsenic	0.0021	0.0010		mg/L	1	2/14/2019 1:32:28 PM	C57720
Lead	ND	0.00050		mg/L	1	2/14/2019 1:32:28 PM	C57720
Selenium	ND	0.0010		mg/L	1	2/14/2019 1:32:28 PM	C57720
Thallium	ND	0.00050		mg/L	1	2/14/2019 1:32:28 PM	C57720
Uranium	0.016	0.00050		mg/L	1	2/14/2019 1:32:28 PM	C57720
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	ND	0.50		mg/L	5	2/7/2019 8:22:36 PM	R57567
Chloride	640	25		mg/L	50	2/19/2019 3:50:19 AM	R57780
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	2/7/2019 8:22:36 PM	R57567
Bromide	2.0	0.50		mg/L	5	2/7/2019 8:22:36 PM	R57567
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	2/7/2019 8:22:36 PM	R57567
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	2/7/2019 8:22:36 PM	R57567
Sulfate	21	2.5		mg/L	5	2/7/2019 8:22:36 PM	R57567
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**bcv**
Barium	0.38	0.0020		mg/L	1	2/11/2019 2:47:53 PM	B57631
Beryllium	ND	0.0020		mg/L	1	2/11/2019 2:47:53 PM	B57631
Cadmium	ND	0.0020		mg/L	1	2/11/2019 2:47:53 PM	B57631
Calcium	92	1.0		mg/L	1	2/11/2019 2:47:53 PM	B57631
Chromium	ND	0.0060		mg/L	1	2/11/2019 2:47:53 PM	B57631
Copper	ND	0.0060		mg/L	1	2/11/2019 2:47:53 PM	B57631
Iron	0.032	0.020		mg/L	1	2/11/2019 2:47:53 PM	B57631
Magnesium	17	1.0		mg/L	1	2/11/2019 2:47:53 PM	B57631
Manganese	0.082	0.0020	*	mg/L	1	2/11/2019 2:47:53 PM	B57631
Potassium	1.1	1.0		mg/L	1	2/11/2019 2:47:53 PM	B57631
Silver	ND	0.0050		mg/L	1	2/11/2019 2:47:53 PM	B57631
Sodium	450	5.0		mg/L	5	2/11/2019 2:50:09 PM	B57631
Zinc	0.017	0.010		mg/L	1	2/11/2019 2:47:53 PM	B57631
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.42	0.0020		mg/L	1	2/15/2019 9:59:49 AM	43165
Beryllium	ND	0.0020		mg/L	1	2/15/2019 9:59:49 AM	43165
Cadmium	ND	0.0020		mg/L	1	2/15/2019 9:59:49 AM	43165
Chromium	ND	0.0060		mg/L	1	2/15/2019 9:59:49 AM	43165
Copper	0.0094	0.0060		mg/L	1	2/15/2019 9:59:49 AM	43165
Iron	1.9	0.10	*	mg/L	5	2/18/2019 4:01:23 PM	43191
Manganese	0.19	0.0020	*	mg/L	1	2/15/2019 9:59:49 AM	43165
Silver	ND	0.0050		mg/L	1	2/15/2019 9:59:49 AM	43165
Zinc	ND	0.010		mg/L	1	2/18/2019 3:59:22 PM	43191

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 3:00:00 PM
Lab ID: 1902322-005 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **pmf**	
Antimony	ND	0.0010		mg/L	1	2/18/2019 6:11:09 PM	43165
Arsenic	0.0033	0.0010		mg/L	1	2/18/2019 6:11:09 PM	43165
Lead	0.0021	0.00050		mg/L	1	2/18/2019 6:11:09 PM	43165
Selenium	ND	0.0010		mg/L	1	2/19/2019 5:05:09 PM	43165
Thallium	ND	0.00050		mg/L	1	2/18/2019 6:11:09 PM	43165
Uranium	0.017	0.00050		mg/L	1	2/19/2019 5:05:09 PM	43165
EPA METHOD 245.1: MERCURY						Analyst: **pmf**	
Mercury	ND	0.00020		mg/L	1	2/19/2019 12:40:26 PM	43220
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	2/11/2019 4:53:01 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/11/2019 4:53:01 PM	43059
Surr: DNOP	105	70-130		%Rec	1	2/11/2019 4:53:01 PM	43059
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.15	0.050		mg/L	1	2/11/2019 12:29:44 PM	G57625
Surr: BFB	294	72.8-125	S	%Rec	1	2/11/2019 12:29:44 PM	G57625
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Acenaphthylene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Aniline	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Anthracene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Azobenzene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Benz(a)anthracene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Benzo(a)pyrene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Benzo(b)fluoranthene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Benzo(g,h,i)perylene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Benzo(k)fluoranthene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Benzoic acid	ND	20		µg/L	1	2/13/2019 9:56:00 PM	43051
Benzyl alcohol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Bis(2-chloroethyl)ether	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
4-Bromophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Butyl benzyl phthalate	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Carbazole	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
4-Chloro-3-methylphenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
4-Chloroaniline	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 3:00:00 PM
Lab ID: 1902322-005 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Chloronaphthalene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2-Chlorophenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Chrysene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Di-n-butyl phthalate	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Di-n-octyl phthalate	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Dibenz(a,h)anthracene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Dibenzofuran	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
1,2-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
1,3-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
1,4-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
3,3´-Dichlorobenzidine	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Diethyl phthalate	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Dimethyl phthalate	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2,4-Dichlorophenol	ND	20		µg/L	1	2/13/2019 9:56:00 PM	43051
2,4-Dimethylphenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	2/13/2019 9:56:00 PM	43051
2,4-Dinitrophenol	ND	20		µg/L	1	2/13/2019 9:56:00 PM	43051
2,4-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2,6-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Fluoranthene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Fluorene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Hexachlorobenzene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Hexachlorobutadiene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Hexachlorocyclopentadiene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Hexachloroethane	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Isophorone	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
1-Methylnaphthalene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2-Methylnaphthalene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2-Methylphenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
3+4-Methylphenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
N-Nitrosodimethylamine	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
N-Nitrosodiphenylamine	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Naphthalene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2-Nitroaniline	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
3-Nitroaniline	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
4-Nitroaniline	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051

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CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 3:00:00 PM
Lab ID: 1902322-005 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Nitrobenzene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2-Nitrophenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
4-Nitrophenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Pentachlorophenol	ND	20		µg/L	1	2/13/2019 9:56:00 PM	43051
Phenanthrene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Phenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Pyrene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Pyridine	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
1,2,4-Trichlorobenzene	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2,4,5-Trichlorophenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
2,4,6-Trichlorophenol	ND	10		µg/L	1	2/13/2019 9:56:00 PM	43051
Surr: 2-Fluorophenol	55.2	15-74.1		%Rec	1	2/13/2019 9:56:00 PM	43051
Surr: Phenol-d5	42.7	15-59.8		%Rec	1	2/13/2019 9:56:00 PM	43051
Surr: 2,4,6-Tribromophenol	82.9	22.1-112		%Rec	1	2/13/2019 9:56:00 PM	43051
Surr: Nitrobenzene-d5	78.8	33.2-94		%Rec	1	2/13/2019 9:56:00 PM	43051
Surr: 2-Fluorobiphenyl	65.7	34-90.9		%Rec	1	2/13/2019 9:56:00 PM	43051
Surr: 4-Terphenyl-d14	54.9	15-149		%Rec	1	2/13/2019 9:56:00 PM	43051
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Toluene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Ethylbenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Methyl tert-butyl ether (MTBE)	58	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2-Dichloroethane (EDC)	8.2	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Naphthalene	ND	2.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1-Methylnaphthalene	ND	4.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
2-Methylnaphthalene	ND	4.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Acetone	ND	10		µg/L	1	2/11/2019 6:13:52 PM	A57627
Bromobenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Bromodichloromethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Bromoform	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Bromomethane	ND	3.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
2-Butanone	ND	10		µg/L	1	2/11/2019 6:13:52 PM	A57627
Carbon disulfide	ND	10		µg/L	1	2/11/2019 6:13:52 PM	A57627
Carbon Tetrachloride	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Chlorobenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Chloroethane	ND	2.0		µg/L	1	2/11/2019 6:13:52 PM	A57627

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CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 3:00:00 PM
Lab ID: 1902322-005 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chloroform	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Chloromethane	ND	3.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
2-Chlorotoluene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
4-Chlorotoluene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
cis-1,2-DCE	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Dibromochloromethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Dibromomethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,1-Dichloroethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,1-Dichloroethene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2-Dichloropropane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,3-Dichloropropane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
2,2-Dichloropropane	ND	2.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,1-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Hexachlorobutadiene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
2-Hexanone	ND	10		µg/L	1	2/11/2019 6:13:52 PM	A57627
Isopropylbenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
4-Isopropyltoluene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
4-Methyl-2-pentanone	ND	10		µg/L	1	2/11/2019 6:13:52 PM	A57627
Methylene Chloride	ND	3.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
n-Butylbenzene	ND	3.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
n-Propylbenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
sec-Butylbenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Styrene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
tert-Butylbenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
trans-1,2-DCE	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627

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CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 3:00:00 PM
Lab ID: 1902322-005 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Trichlorofluoromethane	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Vinyl chloride	ND	1.0		µg/L	1	2/11/2019 6:13:52 PM	A57627
Xylenes, Total	ND	1.5		µg/L	1	2/11/2019 6:13:52 PM	A57627
Surr: 1,2-Dichloroethane-d4	119	70-130		%Rec	1	2/11/2019 6:13:52 PM	A57627
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	2/11/2019 6:13:52 PM	A57627
Surr: Dibromofluoromethane	144	70-130	S	%Rec	1	2/11/2019 6:13:52 PM	A57627
Surr: Toluene-d8	98.5	70-130		%Rec	1	2/11/2019 6:13:52 PM	A57627

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:53:00 PM
Lab ID: 1902322-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Antimony	ND	0.0010		mg/L	1	2/14/2019 1:34:53 PM	C57720
Arsenic	0.0027	0.0010		mg/L	1	2/14/2019 1:34:53 PM	C57720
Lead	0.0065	0.00050		mg/L	1	2/14/2019 1:34:53 PM	C57720
Selenium	ND	0.0010		mg/L	1	2/14/2019 1:34:53 PM	C57720
Thallium	ND	0.00050		mg/L	1	2/14/2019 1:34:53 PM	C57720
Uranium	0.056	0.0025	*	mg/L	5	2/14/2019 2:23:07 PM	C57720
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	ND	0.50		mg/L	5	2/7/2019 8:47:25 PM	R57567
Chloride	230	10		mg/L	20	2/7/2019 8:59:49 PM	R57567
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	2/7/2019 8:47:25 PM	R57567
Bromide	2.1	0.50		mg/L	5	2/7/2019 8:47:25 PM	R57567
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	2/7/2019 8:47:25 PM	R57567
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	2/7/2019 8:47:25 PM	R57567
Sulfate	30	2.5		mg/L	5	2/7/2019 8:47:25 PM	R57567
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**bcv**
Barium	0.16	0.0020		mg/L	1	2/11/2019 2:52:29 PM	B57631
Beryllium	ND	0.0020		mg/L	1	2/11/2019 2:52:29 PM	B57631
Cadmium	ND	0.0020		mg/L	1	2/11/2019 2:52:29 PM	B57631
Calcium	60	1.0		mg/L	1	2/11/2019 2:52:29 PM	B57631
Chromium	ND	0.0060		mg/L	1	2/11/2019 2:52:29 PM	B57631
Copper	ND	0.0060		mg/L	1	2/11/2019 2:52:29 PM	B57631
Iron	0.51	0.020	*	mg/L	1	2/11/2019 2:52:29 PM	B57631
Magnesium	16	1.0		mg/L	1	2/11/2019 2:52:29 PM	B57631
Manganese	1.4	0.010	*	mg/L	5	2/11/2019 2:54:47 PM	B57631
Potassium	ND	1.0		mg/L	1	2/11/2019 2:52:29 PM	B57631
Silver	ND	0.0050		mg/L	1	2/11/2019 2:52:29 PM	B57631
Sodium	390	5.0		mg/L	5	2/11/2019 2:54:47 PM	B57631
Zinc	0.025	0.010		mg/L	1	2/11/2019 2:52:29 PM	B57631
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.26	0.0020		mg/L	1	2/15/2019 10:06:08 AM	43165
Beryllium	ND	0.0020		mg/L	1	2/15/2019 10:06:08 AM	43165
Cadmium	ND	0.0020		mg/L	1	2/15/2019 10:06:08 AM	43165
Chromium	ND	0.0060		mg/L	1	2/15/2019 10:06:08 AM	43165
Copper	0.026	0.0060		mg/L	1	2/15/2019 10:06:08 AM	43165
Iron	2.5	0.10	*	mg/L	5	2/18/2019 4:05:29 PM	43191
Manganese	1.5	0.010	*	mg/L	5	2/15/2019 10:08:07 AM	43165
Silver	ND	0.0050		mg/L	1	2/15/2019 10:06:08 AM	43165
Zinc	ND	0.010		mg/L	1	2/18/2019 4:03:29 PM	43191

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Qualifiers:

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PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:53:00 PM
Lab ID: 1902322-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **pmf**	
Antimony	ND	0.0010		mg/L	1	2/18/2019 6:13:06 PM	43165
Arsenic	0.0035	0.0010		mg/L	1	2/18/2019 6:13:06 PM	43165
Lead	0.011	0.00050		mg/L	1	2/18/2019 6:13:06 PM	43165
Selenium	ND	0.0010		mg/L	1	2/19/2019 5:07:05 PM	43165
Thallium	ND	0.00050		mg/L	1	2/18/2019 6:13:06 PM	43165
Uranium	0.052	0.0025	*	mg/L	5	2/19/2019 5:09:02 PM	43165
EPA METHOD 245.1: MERCURY						Analyst: **pmf**	
Mercury	ND	0.00020		mg/L	1	2/19/2019 12:42:41 PM	43220
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **lrm**	
Diesel Range Organics (DRO)	1.6	1.0		mg/L	1	2/11/2019 5:17:21 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	2/11/2019 5:17:21 PM	43059
Surr: DNOP	101	70-130		%Rec	1	2/11/2019 5:17:21 PM	43059
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.4	0.050		mg/L	1	2/11/2019 12:52:22 PM	G57625
Surr: BFB	106	72.8-125		%Rec	1	2/11/2019 12:52:22 PM	G57625
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Acenaphthylene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Aniline	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Anthracene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Azobenzene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Benz(a)anthracene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Benzo(a)pyrene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Benzo(b)fluoranthene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Benzo(g,h,i)perylene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Benzo(k)fluoranthene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Benzoic acid	ND	20		µg/L	1	2/13/2019 10:24:58 PM	43051
Benzyl alcohol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Bis(2-chloroethyl)ether	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
4-Bromophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Butyl benzyl phthalate	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Carbazole	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
4-Chloro-3-methylphenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
4-Chloroaniline	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:53:00 PM
Lab ID: 1902322-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Chloronaphthalene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2-Chlorophenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Chrysene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Di-n-butyl phthalate	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Di-n-octyl phthalate	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Dibenz(a,h)anthracene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Dibenzofuran	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
1,2-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
1,3-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
1,4-Dichlorobenzene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
3,3´-Dichlorobenzidine	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Diethyl phthalate	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Dimethyl phthalate	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2,4-Dichlorophenol	ND	20		µg/L	1	2/13/2019 10:24:58 PM	43051
2,4-Dimethylphenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	2/13/2019 10:24:58 PM	43051
2,4-Dinitrophenol	ND	20		µg/L	1	2/13/2019 10:24:58 PM	43051
2,4-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2,6-Dinitrotoluene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Fluoranthene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Fluorene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Hexachlorobenzene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Hexachlorobutadiene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Hexachlorocyclopentadiene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Hexachloroethane	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Isophorone	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
1-Methylnaphthalene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2-Methylnaphthalene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2-Methylphenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
3+4-Methylphenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
N-Nitrosodimethylamine	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
N-Nitrosodiphenylamine	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Naphthalene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2-Nitroaniline	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
3-Nitroaniline	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
4-Nitroaniline	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:53:00 PM
Lab ID: 1902322-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Nitrobenzene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2-Nitrophenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
4-Nitrophenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Pentachlorophenol	ND	20		µg/L	1	2/13/2019 10:24:58 PM	43051
Phenanthrene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Phenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Pyrene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Pyridine	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
1,2,4-Trichlorobenzene	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2,4,5-Trichlorophenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
2,4,6-Trichlorophenol	ND	10		µg/L	1	2/13/2019 10:24:58 PM	43051
Surr: 2-Fluorophenol	24.0	15-74.1		%Rec	1	2/13/2019 10:24:58 PM	43051
Surr: Phenol-d5	21.6	15-59.8		%Rec	1	2/13/2019 10:24:58 PM	43051
Surr: 2,4,6-Tribromophenol	39.2	22.1-112		%Rec	1	2/13/2019 10:24:58 PM	43051
Surr: Nitrobenzene-d5	35.8	33.2-94		%Rec	1	2/13/2019 10:24:58 PM	43051
Surr: 2-Fluorobiphenyl	32.3	34-90.9	S	%Rec	1	2/13/2019 10:24:58 PM	43051
Surr: 4-Terphenyl-d14	33.7	15-149		%Rec	1	2/13/2019 10:24:58 PM	43051
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	70	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Toluene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Ethylbenzene	20	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Methyl tert-butyl ether (MTBE)	1600	20		µg/L	20	2/11/2019 6:43:04 PM	A57627
1,2,4-Trimethylbenzene	14	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Naphthalene	ND	4.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1-Methylnaphthalene	ND	8.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
2-Methylnaphthalene	ND	8.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Acetone	ND	20		µg/L	2	2/11/2019 7:12:13 PM	A57627
Bromobenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Bromodichloromethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Bromoform	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Bromomethane	ND	6.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
2-Butanone	ND	20		µg/L	2	2/11/2019 7:12:13 PM	A57627
Carbon disulfide	ND	20		µg/L	2	2/11/2019 7:12:13 PM	A57627
Carbon Tetrachloride	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Chlorobenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Chloroethane	ND	4.0		µg/L	2	2/11/2019 7:12:13 PM	A57627

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:53:00 PM
Lab ID: 1902322-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chloroform	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Chloromethane	ND	6.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
2-Chlorotoluene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
4-Chlorotoluene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
cis-1,2-DCE	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Dibromochloromethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Dibromomethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2-Dichlorobenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,3-Dichlorobenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,4-Dichlorobenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Dichlorodifluoromethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,1-Dichloroethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,1-Dichloroethene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2-Dichloropropane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,3-Dichloropropane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
2,2-Dichloropropane	ND	4.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,1-Dichloropropene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Hexachlorobutadiene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
2-Hexanone	ND	20		µg/L	2	2/11/2019 7:12:13 PM	A57627
Isopropylbenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
4-Isopropyltoluene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
4-Methyl-2-pentanone	ND	20		µg/L	2	2/11/2019 7:12:13 PM	A57627
Methylene Chloride	ND	6.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
n-Butylbenzene	ND	6.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
n-Propylbenzene	2.2	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
sec-Butylbenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Styrene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
tert-Butylbenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
trans-1,2-DCE	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,1,1-Trichloroethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,1,2-Trichloroethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627

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CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1ST QTR GW SAMPLES
Collection Date: 2/6/2019 1:53:00 PM
Lab ID: 1902322-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Trichloroethene (TCE)	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Trichlorofluoromethane	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
1,2,3-Trichloropropane	ND	4.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Vinyl chloride	ND	2.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Xylenes, Total	ND	3.0		µg/L	2	2/11/2019 7:12:13 PM	A57627
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	2	2/11/2019 7:12:13 PM	A57627
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	2	2/11/2019 7:12:13 PM	A57627
Surr: Dibromofluoromethane	109	70-130		%Rec	2	2/11/2019 7:12:13 PM	A57627
Surr: Toluene-d8	101	70-130		%Rec	2	2/11/2019 7:12:13 PM	A57627

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B57631**	RunNo: **57631**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928472** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B57631**	RunNo: **57631**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928473** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020	0.002000	0	92.3	50	150			
Beryllium	ND	0.0020	0.002000	0	79.8	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	ND	1.0	0.5000	0	107	50	150			
Chromium	0.0060	0.0060	0.006000	0	101	50	150			
Copper	0.0064	0.0060	0.006000	0	107	50	150			
Iron	0.021	0.020	0.02000	0	105	50	150			
Magnesium	ND	1.0	0.5000	0	106	50	150			
Manganese	ND	0.0020	0.002000	0	98.6	50	150			
Potassium	ND	1.0	0.5000	0	102	50	150			
Silver	ND	0.0050	0.005000	0	96.6	50	150			
Sodium	ND	1.0	0.5000	0	93.7	50	150			
Zinc	ND	0.010	0.005000	0	98.4	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B57631**	RunNo: **57631**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928474** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.1	85	115			
Beryllium	0.51	0.0020	0.5000	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B57631**	RunNo: **57631**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928474** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.49	0.0060	0.5000	0	98.9	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	51	1.0	50.00	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	98.0	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Sodium	50	1.0	50.00	0	99.0	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **MB-43165** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **PBW** Batch ID: **43165** RunNo: **57733**

Prep Date: **2/14/2019** Analysis Date: **2/15/2019** SeqNo: **1932234** Units: **mg/L**

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

Sample ID: **LCS-43165** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **LCSW** Batch ID: **43165** RunNo: **57733**

Prep Date: **2/14/2019** Analysis Date: **2/15/2019** SeqNo: **1932238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.3	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.3	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.3	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.49	0.0060	0.5000	0	99.0	85	115			
Manganese	0.48	0.0020	0.5000	0	95.8	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.48	0.010	0.5000	0	95.1	85	115			

Sample ID: **LLLCS-43165** SampType: **LCSLL** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **BatchQC** Batch ID: **43165** RunNo: **57733**

Prep Date: **2/14/2019** Analysis Date: **2/15/2019** SeqNo: **1932240** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	105	50	150			
Beryllium	ND	0.0020	0.002000	0	98.1	50	150			
Cadmium	0.0022	0.0020	0.002000	0	111	50	150			
Chromium	ND	0.0060	0.006000	0	97.0	50	150			
Copper	0.0086	0.0060	0.006000	0	144	50	150			
Manganese	0.0027	0.0020	0.002000	0	134	50	150			
Silver	0.0055	0.0050	0.005000	0	110	50	150			
Zinc	0.015	0.010	0.005000	0	302	50	150			S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **MB-43191**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **43191**	RunNo: **57777**
Prep Date: **2/15/2019**	Analysis Date: **2/18/2019**	SeqNo: **1934081** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Zinc	ND	0.010								

Sample ID: **LLLCS-43191**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **43191**	RunNo: **57777**
Prep Date: **2/15/2019**	Analysis Date: **2/18/2019**	SeqNo: **1934083** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.022	0.020	0.02000	0	111	50	150			
Zinc	ND	0.010	0.005000	0	115	50	150			

Sample ID: **LCS-43191**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **43191**	RunNo: **57777**
Prep Date: **2/15/2019**	Analysis Date: **2/18/2019**	SeqNo: **1934085** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.9	85	115			
Zinc	0.47	0.010	0.5000	0	95.0	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C57720**	RunNo: **57720**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1931427** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C57720**	RunNo: **57720**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1931428** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	105	50	150			
Arsenic	ND	0.0010	0.001000	0	99.0	50	150			
Lead	ND	0.00050	0.0005000	0	98.7	50	150			
Selenium	0.0010	0.0010	0.001000	0	101	50	150			
Thallium	ND	0.00050	0.0005000	0	100	50	150			
Uranium	0.00058	0.00050	0.0005000	0	115	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C57720**	RunNo: **57720**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1931429** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	100	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.9	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.8	85	115			
Thallium	0.012	0.00050	0.01250	0	99.0	85	115			
Uranium	0.012	0.00050	0.01250	0	94.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **MB-43165**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW**	Batch ID: **43165**	RunNo: **57756**
Prep Date: **2/14/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933493** Units: **mg/L**

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

Sample ID: **MSLLLCS-43165**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC**	Batch ID: **43165**	RunNo: **57756**
Prep Date: **2/14/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933495** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	113	50	150			
Arsenic	ND	0.0010	0.001000	0	97.0	50	150			
Lead	ND	0.00050	0.0005000	0	99.0	50	150			
Selenium	ND	0.0010	0.001000	0	91.4	50	150			
Thallium	ND	0.00050	0.0005000	0	93.7	50	150			
Uranium	ND	0.00050	0.0005000	0	99.8	50	150			

Sample ID: **MSLCS-43165**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW**	Batch ID: **43165**	RunNo: **57756**
Prep Date: **2/14/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933497** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	102	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.025	0.0010	0.02500	0	98.6	85	115			
Thallium	0.012	0.00050	0.01250	0	98.4	85	115			
Uranium	0.012	0.00050	0.01250	0	98.7	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **MB-43220**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **43220**	RunNo: **57794**
Prep Date: **2/18/2019**	Analysis Date: **2/19/2019**	SeqNo: **1934953** Units: **mg/L**

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

Sample ID: **LCS-43220**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **43220**	RunNo: **57794**
Prep Date: **2/18/2019**	Analysis Date: **2/19/2019**	SeqNo: **1934954** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R57567**	RunNo: **57567**
Prep Date:	Analysis Date: **2/7/2019**	SeqNo: **1925612** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R57567**	RunNo: **57567**
Prep Date:	Analysis Date: **2/7/2019**	SeqNo: **1925613** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	105	90	110			
Chloride	4.8	0.50	5.000	0	95.4	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.5	90	110			
Bromide	2.4	0.10	2.500	0	96.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.1	90	110			
Sulfate	9.8	0.50	10.00	0	98.3	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R57780**	RunNo: **57780**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1934418** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R57780**	RunNo: **57780**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1934419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **LCS-43059**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.8	71.8	135			
Surr: DNOP	0.55		0.5000		110	70	130			

Sample ID: **MB-43059**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928264** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		100	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	77.7	130			
Surr: BFB	25		20.00		123	72.8	125			

Sample ID: **1902322-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-55**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928270** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	39	1.0	10.00	28.47	104	65.4	140			
Surr: BFB	510		400.0		129	72.8	125			S

Sample ID: **1902322-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-55**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928271** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	38	1.0	10.00	28.47	93.9	65.4	140	2.52	20	
Surr: BFB	500		400.0		126	72.8	125	0	0	S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928373** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928373** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928374** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.1	70	130			
Toluene	18	1.0	20.00	0	90.1	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928374** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	91.5	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	79.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.9	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **1902322-003a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-54**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928383** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	110	2.0	40.00	72.84	95.1	70	130			
Toluene	38	2.0	40.00	1.848	90.9	70	130			
Chlorobenzene	39	2.0	40.00	0	96.6	70	130			
1,1-Dichloroethene	45	2.0	40.00	0	113	67.6	130			
Trichloroethene (TCE)	37	2.0	40.00	0	93.6	70	130			
Surr: 1,2-Dichloroethane-d4	21		20.00		106	70	130			
Surr: 4-Bromofluorobenzene	19		20.00		96.4	70	130			
Surr: Dibromofluoromethane	21		20.00		107	70	130			
Surr: Toluene-d8	20		20.00		99.0	70	130			

Sample ID: **1902322-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-54**	Batch ID: **A57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928384** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	110	2.0	40.00	72.84	90.8	70	130	1.55	20	
Toluene	39	2.0	40.00	1.848	92.3	70	130	1.50	20	
Chlorobenzene	38	2.0	40.00	0	93.9	70	130	2.79	20	
1,1-Dichloroethene	41	2.0	40.00	0	102	67.6	130	9.91	20	
Trichloroethene (TCE)	36	2.0	40.00	0	89.8	70	130	4.18	20	
Surr: 1,2-Dichloroethane-d4	22		20.00		111	70	130	0	0	
Surr: 4-Bromofluorobenzene	19		20.00		96.5	70	130	0	0	
Surr: Dibromofluoromethane	22		20.00		109	70	130	0	0	
Surr: Toluene-d8	20		20.00		101	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **1902322-004bms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-55**	Batch ID: **43051**	RunNo: **57712**
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931279** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	52	10	100.0	0	52.3	15	123			
4-Chloro-3-methylphenol	100	10	200.0	0	50.7	26.6	118			
2-Chlorophenol	100	10	200.0	0	50.2	15	120			
1,4-Dichlorobenzene	35	10	100.0	0	34.8	19	108			
2,4-Dinitrotoluene	51	10	100.0	0	51.2	27.8	103			
N-Nitrosodi-n-propylamine	69	10	100.0	0	68.7	32.3	126			
4-Nitrophenol	73	10	200.0	0	36.4	15	72.1			
Pentachlorophenol	110	20	200.0	0	52.8	15	114			
Phenol	38	10	200.0	26.10	5.76	15	67.5			S
Pyrene	60	10	100.0	0	60.3	31.2	112			
1,2,4-Trichlorobenzene	44	10	100.0	0	44.3	22.1	123			
Surr: 2-Fluorophenol	49		200.0		24.5	15	74.1			
Surr: Phenol-d5	28		200.0		14.0	15	59.8			S
Surr: 2,4,6-Tribromophenol	130		200.0		62.9	22.1	112			
Surr: Nitrobenzene-d5	56		100.0		56.4	33.2	94			
Surr: 2-Fluorobiphenyl	54		100.0		53.7	34	90.9			
Surr: 4-Terphenyl-d14	47		100.0		46.9	15	149			

Sample ID: **1902322-004bmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-55**	Batch ID: **43051**	RunNo: **57712**
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931280** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	42	10	100.0	0	42.1	15	123	21.6	30.5	
4-Chloro-3-methylphenol	95	10	200.0	0	47.4	26.6	118	6.83	50	
2-Chlorophenol	88	10	200.0	0	44.1	15	120	12.9	36.3	
1,4-Dichlorobenzene	30	10	100.0	0	30.3	19	108	13.6	42.1	
2,4-Dinitrotoluene	39	10	100.0	0	39.2	27.8	103	26.4	28.5	
N-Nitrosodi-n-propylamine	51	10	100.0	0	50.5	32.3	126	30.4	25.4	R
4-Nitrophenol	36	10	200.0	0	17.8	15	72.1	68.7	50	R
Pentachlorophenol	75	20	200.0	0	37.3	15	114	34.3	50	
Phenol	65	10	200.0	26.10	19.4	15	67.5	53.3	46.1	R
Pyrene	49	10	100.0	0	49.3	31.2	112	20.1	34.3	
1,2,4-Trichlorobenzene	35	10	100.0	0	34.7	22.1	123	24.4	43.6	
Surr: 2-Fluorophenol	65		200.0		32.5	15	74.1	0	0	
Surr: Phenol-d5	50		200.0		24.8	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	99		200.0		49.6	22.1	112	0	0	
Surr: Nitrobenzene-d5	44		100.0		44.1	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	41		100.0		41.2	34	90.9	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **1902322-004bmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-55**	Batch ID: **43051**	RunNo: **57712**
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931280** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	38		100.0		38.5	15	149	0	0	

Sample ID: **lcs-43051**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **43051**	RunNo: **57712**
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931284** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	59	10	100.0	0	59.3	55.1	104			
4-Chloro-3-methylphenol	140	10	200.0	0	67.6	57	115			
2-Chlorophenol	130	10	200.0	0	66.7	43.4	112			
1,4-Dichlorobenzene	42	10	100.0	0	41.7	38	95.2			
2,4-Dinitrotoluene	61	10	100.0	0	60.9	55.1	96.7			
N-Nitrosodi-n-propylamine	71	10	100.0	0	70.6	55	112			
4-Nitrophenol	88	10	200.0	0	43.9	16.6	93			
Pentachlorophenol	120	20	200.0	0	62.5	43.2	104			
Phenol	89	10	200.0	0	44.3	21.3	85.7			
Pyrene	68	10	100.0	0	67.8	64.9	105			
1,2,4-Trichlorobenzene	49	10	100.0	0	48.6	42.6	107			
Surr: 2-Fluorophenol	79		200.0		39.6	15	74.1			
Surr: Phenol-d5	68		200.0		34.1	15	59.8			
Surr: 2,4,6-Tribromophenol	120		200.0		62.5	22.1	112			
Surr: Nitrobenzene-d5	55		100.0		55.0	33.2	94			
Surr: 2-Fluorobiphenyl	46		100.0		45.5	34	90.9			
Surr: 4-Terphenyl-d14	47		100.0		47.0	15	149			

Sample ID: **mb-43051**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43051**	RunNo: **57712**
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931285** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **mb-43051**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43051**	RunNo: **57712**
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931285** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902322**

28-Feb-19

Client: MARATHON GALLUP

Project: 2019 1ST QTR GW SAMPLES

Sample ID: **mb-43051**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **43051**	RunNo: **57712**	
Prep Date: **2/8/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931285**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	110		200.0		53.9	15	74.1			
Surr: Phenol-d5	83		200.0		41.4	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		72.2	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		67.2	33.2	94			
Surr: 2-Fluorobiphenyl	52		100.0		52.1	34	90.9			
Surr: 4-Terphenyl-d14	55		100.0		55.3	15	149			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1902322 RcptNo: 1

Received By: Isaiah Ortiz 2/7/2019 12:15:00 PM I-Ok

Completed By: Anne Thorne 2/7/2019 3:18:57 PM Anne Thorne

Reviewed By: LB 2/7/19

LB TWM 2-7-19

Chain of Custody

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

Log In

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

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

Adjusted? No

Checked by: TWM

Special Handling (if applicable)

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

Person Notified: Date

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.5	Good	Yes			
2	1.8	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - WESTERN REFINING SW

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2019 1ST QTR GW SAMPLES

Project #:

OW-54,55,56

Project Manager:

Brian Moore

Sampler: C. JOHNSON (CAJohnson1@marathonpetroleum.com)

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.5°C (8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1902322	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS								Air Bubbles (Y or N)
2/6/2019	700	aqueous	FIELD BLANK	3-40ML VOAS	HCL	001	X													
2/6/2019	700	aqueous	TRIP BLANK	3-40ML VOAS	Misc	002	X													
2/6/2019	1348	aqueous	OW-54	Misc	Misc	003	X	X	X	X	X	X								
2/6/2019	1430	aqueous	OW-55	Misc	Misc	004	X	X	X	X	2	X								
2/6/2019	1500	aqueous	OW-56	MISC	Misc	005	X	X	X	X	X	X								
2/6/2019	1353	aqueous	DUPLICATE	Misc	Misc	006	X	X	X	X	X	X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/7/19	1000			2/7/19	1215
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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

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

February 27, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 1st QTR GW Samples OrderNo.: 1902323

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/7/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1902323**
Date Reported: **2/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 10:00:00 AM
Lab ID: 1902323-001 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.35	0.17	1.0	J	µg/L	1	2/8/2019 1:44:00 PM	R57586
Toluene	0.35	0.17	1.0	J	µg/L	1	2/8/2019 1:44:00 PM	R57586
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Naphthalene	ND	0.29	2.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Acetone	5.8	0.76	10	J	µg/L	1	2/8/2019 1:44:00 PM	R57586
Bromobenzene	ND	0.32	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Bromoform	ND	0.32	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Bromomethane	ND	0.27	3.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
2-Butanone	ND	1.4	10		µg/L	1	2/8/2019 1:44:00 PM	R57586
Carbon disulfide	ND	0.39	10		µg/L	1	2/8/2019 1:44:00 PM	R57586
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Chloroethane	ND	0.16	2.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Chloroform	ND	0.24	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Chloromethane	ND	0.32	3.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Dibromomethane	ND	0.32	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/8/2019 1:44:00 PM	R57586

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 10:00:00 AM
Lab ID: 1902323-001 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
2-Hexanone	ND	0.91	10		µg/L	1	2/8/2019 1:44:00 PM	R57586
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/8/2019 1:44:00 PM	R57586
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Styrene	ND	0.25	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/8/2019 1:44:00 PM	R57586
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/8/2019 1:44:00 PM	R57586
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	2/8/2019 1:44:00 PM	R57586
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	2/8/2019 1:44:00 PM	R57586
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	2/8/2019 1:44:00 PM	R57586
Surr: Toluene-d8	95.7	0	70-130		%Rec	1	2/8/2019 1:44:00 PM	R57586

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Samples
Collection Date:
Lab ID: 1902323-002
Matrix: TRIP BLANK
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Toluene	ND	0.17	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Naphthalene	ND	0.29	2.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Acetone	1.7	0.76	10	J	µg/L	1	2/11/2019 2:18:48 PM	C57627
Bromobenzene	ND	0.32	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Bromoform	ND	0.32	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Bromomethane	ND	0.27	3.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
2-Butanone	ND	1.4	10		µg/L	1	2/11/2019 2:18:48 PM	C57627
Carbon disulfide	ND	0.39	10		µg/L	1	2/11/2019 2:18:48 PM	C57627
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Chloroethane	ND	0.16	2.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Chloroform	ND	0.24	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Chloromethane	ND	0.32	3.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Dibromomethane	ND	0.32	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/11/2019 2:18:48 PM	C57627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Samples
Collection Date:
Lab ID: 1902323-002
Matrix: TRIP BLANK
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
2-Hexanone	ND	0.91	10		µg/L	1	2/11/2019 2:18:48 PM	C57627
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/11/2019 2:18:48 PM	C57627
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Styrene	ND	0.25	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/11/2019 2:18:48 PM	C57627
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/11/2019 2:18:48 PM	C57627
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	2/11/2019 2:18:48 PM	C57627
Surr: 4-Bromofluorobenzene	99.1	0	70-130		%Rec	1	2/11/2019 2:18:48 PM	C57627
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	2/11/2019 2:18:48 PM	C57627
Surr: Toluene-d8	105	0	70-130		%Rec	1	2/11/2019 2:18:48 PM	C57627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 11:45:00 AM
Lab ID: 1902323-003
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	2/13/2019 12:00:07 PM	43110
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	4.3	0.63	1.0		mg/L	1	2/11/2019 5:41:43 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/11/2019 5:41:43 PM	43059
Surr: DNOP	101	0	70-130		%Rec	1	2/11/2019 5:41:43 PM	43059
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	36	1.1	2.5		mg/L	50	2/11/2019 1:37:47 PM	G57625
Surr: BFB	99.3	0	72.8-125		%Rec	50	2/11/2019 1:37:47 PM	G57625
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	2.2	0.0032	0.010	*	mg/L	5	2/11/2019 2:00:24 PM	A57631
Beryllium	ND	0.00028	0.0020		mg/L	1	2/11/2019 1:58:24 PM	A57631
Cadmium	ND	0.00055	0.0020		mg/L	1	2/11/2019 1:58:24 PM	A57631
Chromium	ND	0.0015	0.0060		mg/L	1	2/11/2019 1:58:24 PM	A57631
Copper	ND	0.0013	0.0060		mg/L	1	2/11/2019 1:58:24 PM	A57631
Iron	4.6	0.044	0.10	*	mg/L	5	2/11/2019 2:00:24 PM	A57631
Manganese	2.0	0.0014	0.010	*	mg/L	5	2/11/2019 2:00:24 PM	A57631
Silver	ND	0.00094	0.0050		mg/L	1	2/11/2019 1:58:24 PM	A57631
Zinc	0.020	0.0023	0.010		mg/L	1	2/11/2019 1:58:24 PM	A57631
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Barium	2.4	0.0024	0.010	*	mg/L	5	2/12/2019 9:00:14 PM	43081
Beryllium	0.00028	0.00022	0.0020	J	mg/L	1	2/12/2019 8:53:46 PM	43081
Cadmium	ND	0.00074	0.0020		mg/L	1	2/12/2019 8:53:46 PM	43081
Chromium	ND	0.0012	0.0060		mg/L	1	2/12/2019 8:53:46 PM	43081
Copper	ND	0.0041	0.0060		mg/L	1	2/12/2019 8:53:46 PM	43081
Iron	5.0	0.030	0.10	*	mg/L	5	2/12/2019 9:00:14 PM	43081
Manganese	2.1	0.00030	0.010	*	mg/L	5	2/12/2019 9:00:14 PM	43081
Silver	ND	0.0014	0.0050		mg/L	1	2/12/2019 8:53:46 PM	43081
Zinc	ND	0.0058	0.010		mg/L	1	2/12/2019 8:53:46 PM	43081
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00024	0.00020	0.0010	J	mg/L	1	2/14/2019 12:22:11 PM	C57720
Arsenic	0.0052	0.000068	0.0010		mg/L	1	2/14/2019 12:22:11 PM	C57720
Lead	0.000055	0.000047	0.00050	J	mg/L	1	2/14/2019 12:22:11 PM	C57720
Selenium	ND	0.00020	0.0010		mg/L	1	2/14/2019 12:22:11 PM	C57720
Thallium	ND	0.000032	0.00050		mg/L	1	2/14/2019 12:22:11 PM	C57720
Uranium	0.0028	0.000030	0.00050		mg/L	1	2/14/2019 12:51:21 PM	C57720
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 11:45:00 AM
Lab ID: 1902323-003
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	2/15/2019 3:16:05 PM	43081
Arsenic	0.0058	0.000022	0.0010		mg/L	1	2/12/2019 8:26:48 PM	43081
Lead	0.00018	0.000063	0.00050	J	mg/L	1	2/12/2019 8:26:48 PM	43081
Selenium	0.00032	0.00012	0.0010	J	mg/L	1	2/12/2019 8:26:48 PM	43081
Thallium	0.000057	0.000050	0.00050	J	mg/L	1	2/12/2019 8:26:48 PM	43081
Uranium	0.0028	0.000050	0.00050		mg/L	1	2/13/2019 5:41:46 PM	43081
EPA METHOD 245.1: MERCURY							Analyst: **DBK**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	2/13/2019 11:11:54 AM	43101
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	16000	87	500		µg/L	500	2/8/2019 2:08:00 PM	R57586
Toluene	12	8.4	50	J	µg/L	50	2/8/2019 2:32:00 PM	R57586
Ethylbenzene	680	11	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Methyl tert-butyl ether (MTBE)	730	23	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2,4-Trimethylbenzene	ND	13	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,3,5-Trimethylbenzene	ND	12	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2-Dichloroethane (EDC)	ND	9.5	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Naphthalene	27	14	100	J	µg/L	50	2/8/2019 2:32:00 PM	R57586
1-Methylnaphthalene	28	17	200	J	µg/L	50	2/8/2019 2:32:00 PM	R57586
2-Methylnaphthalene	ND	17	200		µg/L	50	2/8/2019 2:32:00 PM	R57586
Acetone	ND	38	500		µg/L	50	2/8/2019 2:32:00 PM	R57586
Bromobenzene	ND	16	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Bromodichloromethane	ND	14	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Bromoform	ND	16	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Bromomethane	ND	14	150		µg/L	50	2/8/2019 2:32:00 PM	R57586
2-Butanone	ND	71	500		µg/L	50	2/8/2019 2:32:00 PM	R57586
Carbon disulfide	ND	19	500		µg/L	50	2/8/2019 2:32:00 PM	R57586
Carbon Tetrachloride	ND	6.9	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Chlorobenzene	ND	15	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Chloroethane	ND	8.2	100		µg/L	50	2/8/2019 2:32:00 PM	R57586
Chloroform	ND	12	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Chloromethane	ND	16	150		µg/L	50	2/8/2019 2:32:00 PM	R57586
2-Chlorotoluene	ND	13	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
4-Chlorotoluene	ND	14	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
cis-1,2-DCE	ND	19	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	2/8/2019 2:32:00 PM	R57586
Dibromochloromethane	ND	12	50		µg/L	50	2/8/2019 2:32:00 PM	R57586

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 11:45:00 AM
Lab ID: 1902323-003
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	16	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2-Dichlorobenzene	ND	16	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,3-Dichlorobenzene	ND	16	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,4-Dichlorobenzene	ND	14	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Dichlorodifluoromethane	ND	13	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,1-Dichloroethane	ND	8.8	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,1-Dichloroethene	ND	6.0	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2-Dichloropropane	ND	8.3	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,3-Dichloropropane	ND	14	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
2,2-Dichloropropane	ND	12	100		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,1-Dichloropropene	ND	8.1	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Hexachlorobutadiene	ND	20	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
2-Hexanone	ND	45	500		µg/L	50	2/8/2019 2:32:00 PM	R57586
Isopropylbenzene	18	11	50	J	µg/L	50	2/8/2019 2:32:00 PM	R57586
4-Isopropyltoluene	ND	12	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
4-Methyl-2-pentanone	ND	23	500		µg/L	50	2/8/2019 2:32:00 PM	R57586
Methylene Chloride	ND	10	150		µg/L	50	2/8/2019 2:32:00 PM	R57586
n-Butylbenzene	ND	12	150		µg/L	50	2/8/2019 2:32:00 PM	R57586
n-Propylbenzene	37	12	50	J	µg/L	50	2/8/2019 2:32:00 PM	R57586
sec-Butylbenzene	ND	10	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Styrene	ND	13	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
tert-Butylbenzene	ND	11	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	2/8/2019 2:32:00 PM	R57586
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
trans-1,2-DCE	ND	9.1	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,1,1-Trichloroethane	ND	8.2	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,1,2-Trichloroethane	ND	12	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Trichloroethene (TCE)	ND	13	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Trichlorofluoromethane	ND	7.2	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
1,2,3-Trichloropropane	ND	28	100		µg/L	50	2/8/2019 2:32:00 PM	R57586
Vinyl chloride	ND	6.1	50		µg/L	50	2/8/2019 2:32:00 PM	R57586
Xylenes, Total	56	32	75	J	µg/L	50	2/8/2019 2:32:00 PM	R57586
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	50	2/8/2019 2:32:00 PM	R57586
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	50	2/8/2019 2:32:00 PM	R57586
Surr: Dibromofluoromethane	102	0	70-130		%Rec	50	2/8/2019 2:32:00 PM	R57586

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 11:45:00 AM
Lab ID: 1902323-003
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	93.3	0	70-130		%Rec	50	2/8/2019 2:32:00 PM	R57586

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 2:48:00 PM
Lab ID: 1902323-004
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0096		µg/L	1	2/13/2019 12:15:00 PM	43110
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/11/2019 6:05:53 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/11/2019 6:05:53 PM	43059
Surr: DNOP	98.0	0	70-130		%Rec	1	2/11/2019 6:05:53 PM	43059
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.0	0.11	0.25		mg/L	5	2/11/2019 2:00:32 PM	G57625
Surr: BFB	94.7	0	72.8-125		%Rec	5	2/11/2019 2:00:32 PM	G57625
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.072	0.00065	0.0020		mg/L	1	2/11/2019 2:09:10 PM	A57631
Cadmium	ND	0.00055	0.0020		mg/L	1	2/11/2019 2:09:10 PM	A57631
Chromium	ND	0.0015	0.0060		mg/L	1	2/11/2019 2:09:10 PM	A57631
Copper	ND	0.0013	0.0060		mg/L	1	2/11/2019 2:09:10 PM	A57631
Iron	0.22	0.0087	0.020		mg/L	1	2/11/2019 2:09:10 PM	A57631
Manganese	0.31	0.00029	0.0020	*	mg/L	1	2/11/2019 2:09:10 PM	A57631
Silver	0.0010	0.00094	0.0050	J	mg/L	1	2/11/2019 2:09:10 PM	A57631
Zinc	0.020	0.0023	0.010		mg/L	1	2/11/2019 2:09:10 PM	A57631
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Barium	0.078	0.00049	0.0020		mg/L	1	2/12/2019 9:13:45 PM	43081
Beryllium	0.00036	0.00022	0.0020	J	mg/L	1	2/12/2019 9:13:45 PM	43081
Cadmium	ND	0.00074	0.0020		mg/L	1	2/12/2019 9:13:45 PM	43081
Chromium	ND	0.0012	0.0060		mg/L	1	2/12/2019 9:13:45 PM	43081
Copper	ND	0.0041	0.0060		mg/L	1	2/12/2019 9:13:45 PM	43081
Iron	0.43	0.0061	0.020	*	mg/L	1	2/12/2019 9:13:45 PM	43081
Manganese	0.33	0.000060	0.0020	*	mg/L	1	2/12/2019 9:13:45 PM	43081
Silver	ND	0.0014	0.0050		mg/L	1	2/12/2019 9:13:45 PM	43081
Zinc	ND	0.0058	0.010		mg/L	1	2/12/2019 9:13:45 PM	43081
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/14/2019 12:24:36 PM	C57720
Arsenic	0.00065	0.000068	0.0010	J	mg/L	1	2/14/2019 12:24:36 PM	C57720
Lead	ND	0.000047	0.00050		mg/L	1	2/14/2019 12:24:36 PM	C57720
Selenium	ND	0.00020	0.0010		mg/L	1	2/14/2019 12:24:36 PM	C57720
Thallium	ND	0.000032	0.00050		mg/L	1	2/14/2019 12:24:36 PM	C57720
Uranium	0.048	0.00015	0.0025	*	mg/L	5	2/14/2019 12:53:46 PM	C57720
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	2/15/2019 3:18:01 PM	43081

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 2:48:00 PM
Lab ID: 1902323-004
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Arsenic	0.0012	0.000022	0.0010		mg/L	1	2/12/2019 8:28:44 PM	43081
Lead	0.00022	0.000063	0.00050	J	mg/L	1	2/12/2019 8:28:44 PM	43081
Selenium	0.00024	0.00012	0.0010	J	mg/L	1	2/12/2019 8:28:44 PM	43081
Thallium	ND	0.000050	0.00050		mg/L	1	2/12/2019 8:28:44 PM	43081
Uranium	0.048	0.00025	0.0025	*	mg/L	5	2/13/2019 5:43:43 PM	43081
EPA METHOD 245.1: MERCURY							Analyst: **DBK**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	2/13/2019 11:14:11 AM	43101
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1.1	0.87	5.0	J	µg/L	5	2/8/2019 4:08:00 PM	R57586
Toluene	ND	0.84	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Ethylbenzene	ND	1.1	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Methyl tert-butyl ether (MTBE)	4000	23	50		µg/L	50	2/8/2019 3:43:00 PM	R57586
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,2-Dichloroethane (EDC)	ND	0.95	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Naphthalene	ND	1.4	10		µg/L	5	2/8/2019 4:08:00 PM	R57586
1-Methylnaphthalene	ND	1.7	20		µg/L	5	2/8/2019 4:08:00 PM	R57586
2-Methylnaphthalene	ND	1.7	20		µg/L	5	2/8/2019 4:08:00 PM	R57586
Acetone	ND	3.8	50		µg/L	5	2/8/2019 4:08:00 PM	R57586
Bromobenzene	ND	1.6	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Bromodichloromethane	ND	1.4	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Bromoform	ND	1.6	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Bromomethane	ND	1.4	15		µg/L	5	2/8/2019 4:08:00 PM	R57586
2-Butanone	ND	7.1	50		µg/L	5	2/8/2019 4:08:00 PM	R57586
Carbon disulfide	ND	1.9	50		µg/L	5	2/8/2019 4:08:00 PM	R57586
Carbon Tetrachloride	ND	0.69	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Chlorobenzene	ND	1.5	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Chloroethane	ND	0.82	10		µg/L	5	2/8/2019 4:08:00 PM	R57586
Chloroform	ND	1.2	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Chloromethane	ND	1.6	15		µg/L	5	2/8/2019 4:08:00 PM	R57586
2-Chlorotoluene	ND	1.3	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
4-Chlorotoluene	ND	1.4	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	2/8/2019 4:08:00 PM	R57586
Dibromochloromethane	ND	1.2	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Dibromomethane	ND	1.6	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 2:48:00 PM
Lab ID: 1902323-004 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,4-Dichlorobenzene	ND	1.4	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,1-Dichloroethane	ND	0.88	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,2-Dichloropropane	ND	0.83	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
2,2-Dichloropropane	ND	1.2	10		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Hexachlorobutadiene	ND	2.0	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
2-Hexanone	ND	4.5	50		µg/L	5	2/8/2019 4:08:00 PM	R57586
Isopropylbenzene	ND	1.1	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	2/8/2019 4:08:00 PM	R57586
Methylene Chloride	ND	1.0	15		µg/L	5	2/8/2019 4:08:00 PM	R57586
n-Butylbenzene	ND	1.2	15		µg/L	5	2/8/2019 4:08:00 PM	R57586
n-Propylbenzene	ND	1.2	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
sec-Butylbenzene	ND	1.0	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Styrene	ND	1.3	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	2/8/2019 4:08:00 PM	R57586
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
trans-1,2-DCE	ND	0.91	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,1,1-Trichloroethane	ND	0.82	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Trichlorofluoromethane	ND	0.72	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	2/8/2019 4:08:00 PM	R57586
Vinyl chloride	ND	0.61	5.0		µg/L	5	2/8/2019 4:08:00 PM	R57586
Xylenes, Total	ND	3.2	7.5		µg/L	5	2/8/2019 4:08:00 PM	R57586
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	5	2/8/2019 4:08:00 PM	R57586
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	5	2/8/2019 4:08:00 PM	R57586
Surr: Dibromofluoromethane	102	0	70-130		%Rec	5	2/8/2019 4:08:00 PM	R57586
Surr: Toluene-d8	93.2	0	70-130		%Rec	5	2/8/2019 4:08:00 PM	R57586

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:40:00 PM
Lab ID: 1902323-005
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0096		µg/L	1	2/13/2019 12:29:52 PM	43110
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/11/2019 6:30:03 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/11/2019 6:30:03 PM	43059
Surr: DNOP	106	0	70-130		%Rec	1	2/11/2019 6:30:03 PM	43059
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.044	0.021	0.050	J	mg/L	1	2/11/2019 2:23:17 PM	G57625
Surr: BFB	98.1	0	72.8-125		%Rec	1	2/11/2019 2:23:17 PM	G57625
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.020	0.00065	0.0020		mg/L	1	2/11/2019 2:13:33 PM	A57631
Beryllium	ND	0.00028	0.0020		mg/L	1	2/11/2019 2:13:33 PM	A57631
Cadmium	ND	0.00055	0.0020		mg/L	1	2/11/2019 2:13:33 PM	A57631
Chromium	ND	0.0015	0.0060		mg/L	1	2/11/2019 2:13:33 PM	A57631
Copper	ND	0.0013	0.0060		mg/L	1	2/11/2019 2:13:33 PM	A57631
Iron	ND	0.0087	0.020		mg/L	1	2/11/2019 2:13:33 PM	A57631
Manganese	0.020	0.00029	0.0020		mg/L	1	2/11/2019 2:13:33 PM	A57631
Silver	ND	0.00094	0.0050		mg/L	1	2/11/2019 2:13:33 PM	A57631
Zinc	0.018	0.0023	0.010		mg/L	1	2/11/2019 2:13:33 PM	A57631
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Barium	0.020	0.00049	0.0020		mg/L	1	2/12/2019 9:18:26 PM	43081
Beryllium	ND	0.00022	0.0020		mg/L	1	2/12/2019 9:18:26 PM	43081
Cadmium	ND	0.00074	0.0020		mg/L	1	2/12/2019 9:18:26 PM	43081
Chromium	ND	0.0012	0.0060		mg/L	1	2/12/2019 9:18:26 PM	43081
Copper	ND	0.0041	0.0060		mg/L	1	2/12/2019 9:18:26 PM	43081
Iron	ND	0.0061	0.020		mg/L	1	2/12/2019 9:18:26 PM	43081
Manganese	0.019	0.000060	0.0020		mg/L	1	2/12/2019 9:18:26 PM	43081
Silver	ND	0.0014	0.0050		mg/L	1	2/12/2019 9:18:26 PM	43081
Zinc	ND	0.0058	0.010		mg/L	1	2/12/2019 9:18:26 PM	43081
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/14/2019 12:27:01 PM	C57720
Arsenic	0.00069	0.000068	0.0010	J	mg/L	1	2/14/2019 12:27:01 PM	C57720
Lead	ND	0.000047	0.00050		mg/L	1	2/14/2019 12:27:01 PM	C57720
Selenium	ND	0.00020	0.0010		mg/L	1	2/14/2019 12:27:01 PM	C57720
Thallium	ND	0.000032	0.00050		mg/L	1	2/14/2019 12:27:01 PM	C57720
Uranium	0.015	0.000030	0.00050		mg/L	1	2/14/2019 12:56:11 PM	C57720
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:40:00 PM
Lab ID: 1902323-005
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	2/15/2019 3:27:48 PM	43081
Arsenic	0.00079	0.000022	0.0010	J	mg/L	1	2/12/2019 8:38:29 PM	43081
Lead	ND	0.000063	0.00050		mg/L	1	2/12/2019 8:38:29 PM	43081
Selenium	0.00026	0.00012	0.0010	J	mg/L	1	2/12/2019 8:38:29 PM	43081
Thallium	ND	0.000050	0.00050		mg/L	1	2/12/2019 8:38:29 PM	43081
Uranium	0.015	0.000050	0.00050		mg/L	1	2/13/2019 5:49:33 PM	43081
EPA METHOD 245.1: MERCURY							Analyst: **DBK**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	2/13/2019 11:16:28 AM	43101
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Toluene	ND	0.17	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Methyl tert-butyl ether (MTBE)	84	0.46	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
1,2-Dichloroethane (EDC)	0.84	0.19	1.0	J	µg/L	1	2/8/2019 4:32:00 PM	R57586
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Naphthalene	ND	0.29	2.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Acetone	ND	0.76	10		µg/L	1	2/8/2019 4:32:00 PM	R57586
Bromobenzene	ND	0.32	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Bromoform	ND	0.32	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Bromomethane	ND	0.27	3.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
2-Butanone	ND	1.4	10		µg/L	1	2/8/2019 4:32:00 PM	R57586
Carbon disulfide	ND	0.39	10		µg/L	1	2/8/2019 4:32:00 PM	R57586
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Chloroethane	ND	0.16	2.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Chloroform	ND	0.24	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Chloromethane	ND	0.32	3.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/8/2019 4:32:00 PM	R57586
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/8/2019 4:32:00 PM	R57586

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:40:00 PM
Lab ID: 1902323-005 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.32	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
2-Hexanone	ND	0.91	10		µg/L	1	2/8/2019 4:32:00 PM	R75786
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/8/2019 4:32:00 PM	R75786
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Styrene	ND	0.25	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/8/2019 4:32:00 PM	R75786
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/8/2019 4:32:00 PM	R75786
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	2/8/2019 4:32:00 PM	R75786
Surr: 4-Bromofluorobenzene	99.7	0	70-130		%Rec	1	2/8/2019 4:32:00 PM	R75786
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	2/8/2019 4:32:00 PM	R75786

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:40:00 PM
Lab ID: 1902323-005
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	95.3	0	70-130		%Rec	1	2/8/2019 4:32:00 PM	R57586

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:46:00 PM
Lab ID: 1902323-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	2/13/2019 12:59:43 PM	43110
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/11/2019 6:54:01 PM	43059
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/11/2019 6:54:01 PM	43059
Surr: DNOP	111	0	70-130		%Rec	1	2/11/2019 6:54:01 PM	43059
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.042	0.021	0.050	J	mg/L	1	2/11/2019 2:46:02 PM	G57625
Surr: BFB	96.6	0	72.8-125		%Rec	1	2/11/2019 2:46:02 PM	G57625
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.020	0.00065	0.0020		mg/L	1	2/11/2019 2:18:02 PM	A57631
Beryllium	ND	0.00028	0.0020		mg/L	1	2/11/2019 2:18:02 PM	A57631
Cadmium	ND	0.00055	0.0020		mg/L	1	2/11/2019 2:18:02 PM	A57631
Chromium	ND	0.0015	0.0060		mg/L	1	2/11/2019 2:18:02 PM	A57631
Copper	ND	0.0013	0.0060		mg/L	1	2/11/2019 2:18:02 PM	A57631
Iron	ND	0.0087	0.020		mg/L	1	2/11/2019 2:18:02 PM	A57631
Manganese	0.018	0.00029	0.0020		mg/L	1	2/11/2019 2:18:02 PM	A57631
Silver	ND	0.00094	0.0050		mg/L	1	2/11/2019 2:18:02 PM	A57631
Zinc	0.016	0.0023	0.010		mg/L	1	2/11/2019 2:18:02 PM	A57631
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Barium	0.019	0.00049	0.0020		mg/L	1	2/12/2019 9:23:02 PM	43081
Beryllium	0.00031	0.00022	0.0020	J	mg/L	1	2/12/2019 9:23:02 PM	43081
Cadmium	ND	0.00074	0.0020		mg/L	1	2/12/2019 9:23:02 PM	43081
Chromium	ND	0.0012	0.0060		mg/L	1	2/12/2019 9:23:02 PM	43081
Copper	ND	0.0041	0.0060		mg/L	1	2/12/2019 9:23:02 PM	43081
Iron	ND	0.0061	0.020		mg/L	1	2/12/2019 9:23:02 PM	43081
Manganese	0.018	0.000060	0.0020		mg/L	1	2/12/2019 9:23:02 PM	43081
Silver	ND	0.0014	0.0050		mg/L	1	2/12/2019 9:23:02 PM	43081
Zinc	ND	0.0058	0.010		mg/L	1	2/12/2019 9:23:02 PM	43081
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/14/2019 12:34:29 PM	C57720
Arsenic	0.00072	0.000068	0.0010	J	mg/L	1	2/14/2019 12:34:29 PM	C57720
Lead	ND	0.000047	0.00050		mg/L	1	2/14/2019 12:34:29 PM	C57720
Selenium	ND	0.00020	0.0010		mg/L	1	2/14/2019 12:34:29 PM	C57720
Thallium	ND	0.000032	0.00050		mg/L	1	2/14/2019 12:34:29 PM	C57720
Uranium	0.015	0.000030	0.00050		mg/L	1	2/14/2019 12:34:29 PM	C57720
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:46:00 PM
Lab ID: 1902323-006
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	2/15/2019 3:29:45 PM	43081
Arsenic	0.00079	0.000022	0.0010	J	mg/L	1	2/12/2019 8:40:25 PM	43081
Lead	ND	0.000063	0.00050		mg/L	1	2/12/2019 8:40:25 PM	43081
Selenium	0.00014	0.00012	0.0010	J	mg/L	1	2/12/2019 8:40:25 PM	43081
Thallium	ND	0.000050	0.00050		mg/L	1	2/12/2019 8:40:25 PM	43081
Uranium	0.015	0.000050	0.00050		mg/L	1	2/13/2019 5:51:30 PM	43081
EPA METHOD 245.1: MERCURY							Analyst: **DBK**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	2/13/2019 11:18:45 AM	43101
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Toluene	ND	0.17	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Methyl tert-butyl ether (MTBE)	80	0.46	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2-Dichloroethane (EDC)	0.89	0.19	1.0	J	µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Naphthalene	ND	0.29	2.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Acetone	ND	0.76	10		µg/L	1	2/11/2019 11:13:00 AM	R57594
Bromobenzene	ND	0.32	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Bromoform	ND	0.32	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Bromomethane	ND	0.27	3.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
2-Butanone	ND	1.4	10		µg/L	1	2/11/2019 11:13:00 AM	R57594
Carbon disulfide	ND	0.39	10		µg/L	1	2/11/2019 11:13:00 AM	R57594
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Chloroethane	ND	0.16	2.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Chloroform	ND	0.24	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Chloromethane	ND	0.32	3.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:46:00 PM
Lab ID: 1902323-006 **Matrix:** AQUEOUS **Received Date:** 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.32	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
2-Hexanone	ND	0.91	10		µg/L	1	2/11/2019 11:13:00 AM	R57594
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/11/2019 11:13:00 AM	R57594
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Styrene	ND	0.25	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/11/2019 11:13:00 AM	R57594
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/11/2019 11:13:00 AM	R57594
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	2/11/2019 11:13:00 AM	R57594
Surr: 4-Bromofluorobenzene	99.4	0	70-130		%Rec	1	2/11/2019 11:13:00 AM	R57594
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	2/11/2019 11:13:00 AM	R57594

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Samples
Collection Date: 2/5/2019 1:46:00 PM
Lab ID: 1902323-006
Matrix: AQUEOUS
Received Date: 2/7/2019 12:15:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	93.6	0	70-130		%Rec	1	2/11/2019 11:13:00 AM	R57594

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A57631**	RunNo: **57631**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928469** Units: **mg/L**

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

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A57631**	RunNo: **57631**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928470** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	79.0	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	88.2	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	82.8	50	150			J
Chromium	0.0069	0.0060	0.006000	0	115	50	150			
Copper	0.0068	0.0060	0.006000	0	113	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0020	0.0020	0.002000	0	97.9	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Zinc	0.0061	0.010	0.005000	0	122	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57631**	RunNo: **57631**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.8	85	115			
Beryllium	0.51	0.0020	0.5000	0	103	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.8	85	115			
Copper	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.49	0.010	0.5000	0	98.8	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **MB-43081** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **PBW** Batch ID: **43081** RunNo: **57658**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1930069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	0.00029	0.0020								J
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-43081** SampType: **LCSLL** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **BatchQC** Batch ID: **43081** RunNo: **57658**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1930071** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	84.7	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	88.3	50	150			J
Cadmium	0.0024	0.0020	0.002000	0	120	50	150			
Chromium	0.0064	0.0060	0.006000	0	107	50	150			
Copper	0.0075	0.0060	0.006000	0	125	50	150			
Iron	0.021	0.020	0.02000	0	103	50	150			
Manganese	0.0022	0.0020	0.002000	0	109	50	150			
Silver	0.0048	0.0050	0.005000	0	96.7	50	150			J
Zinc	0.0063	0.010	0.005000	0	126	50	150			J

Sample ID: **LCS-43081** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **LCSW** Batch ID: **43081** RunNo: **57658**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1930073** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.1	85	115			
Beryllium	0.53	0.0020	0.5000	0	106	85	115			
Cadmium	0.52	0.0020	0.5000	0	105	85	115			
Chromium	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.50	0.020	0.5000	0	99.6	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Silver	0.096	0.0050	0.1000	0	95.8	85	115			
Zinc	0.53	0.010	0.5000	0	106	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **1902323-003EMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **OW-14** Batch ID: **43081** RunNo: **57658**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1930138** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.52	0.0020	0.5000	0.0002794	105	70	130			
Cadmium	0.51	0.0020	0.5000	0	102	70	130			
Chromium	0.47	0.0060	0.5000	0	93.4	70	130			
Copper	0.52	0.0060	0.5000	0	104	70	130			
Silver	0.10	0.0050	0.1000	0	104	70	130			
Zinc	0.48	0.010	0.5000	0	95.8	70	130			

Sample ID: **1902323-003EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **OW-14** Batch ID: **43081** RunNo: **57658**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1930139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.53	0.0020	0.5000	0.0002794	106	70	130	1.39	20	
Cadmium	0.51	0.0020	0.5000	0	103	70	130	1.01	20	
Chromium	0.47	0.0060	0.5000	0	94.1	70	130	0.718	20	
Copper	0.53	0.0060	0.5000	0	105	70	130	1.31	20	
Silver	0.11	0.0050	0.1000	0	105	70	130	1.37	20	
Zinc	0.49	0.010	0.5000	0	97.2	70	130	1.50	20	

Sample ID: **1902323-003EMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **OW-14** Batch ID: **43081** RunNo: **57658**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1930144** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.8	0.010	0.5000	2.365	91.1	70	130			
Manganese	2.5	0.010	0.5000	2.116	84.9	70	130			

Sample ID: **1902323-003EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **OW-14** Batch ID: **43081** RunNo: **57658**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1930145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.8	0.010	0.5000	2.365	93.6	70	130	0.427	20	
Manganese	2.6	0.010	0.5000	2.116	88.7	70	130	0.742	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C57720**	RunNo: **57720**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1931427** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00036	0.0010								J
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	0.00021	0.00050								J

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C57720**	RunNo: **57720**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1931428** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	105	50	150			
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Selenium	0.0010	0.0010	0.001000	0	101	50	150			
Thallium	0.00050	0.00050	0.0005000	0	100	50	150			J
Uranium	0.00058	0.00050	0.0005000	0	115	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C57720**	RunNo: **57720**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1931429** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	100	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.9	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.8	85	115			
Thallium	0.012	0.00050	0.01250	0	99.0	85	115			
Uranium	0.012	0.00050	0.01250	0	94.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **MB-43081**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW**	Batch ID: **43081**	RunNo: **57665**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1929865** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.000061	0.0010								J
Lead	ND	0.00050								
Selenium	0.00012	0.0010								J
Thallium	ND	0.00050								

Sample ID: **MSLLLCS-43081**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC**	Batch ID: **43081**	RunNo: **57665**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1929867** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00054	0.00050	0.0005000	0	109	50	150			
Selenium	0.0011	0.0010	0.001000	0	107	50	150			
Thallium	0.00044	0.00050	0.0005000	0	87.8	50	150			J

Sample ID: **MSLCS-43081**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW**	Batch ID: **43081**	RunNo: **57665**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1929869** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.1	85	115			
Lead	0.012	0.00050	0.01250	0	97.8	85	115			
Selenium	0.025	0.0010	0.02500	0	98.4	85	115			
Thallium	0.012	0.00050	0.01250	0	96.0	85	115			

Sample ID: **1902323-004EMSLL**	SampType: **MSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-29**	Batch ID: **43081**	RunNo: **57665**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1929872** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.001181	99.0	70	130			
Lead	0.012	0.00050	0.01250	0.0002233	94.9	70	130			
Selenium	0.025	0.0010	0.02500	0.0002358	99.4	70	130			
Thallium	0.012	0.00050	0.01250	0	94.2	70	130			

Sample ID: **1902323-004EMSDL**	SampType: **MSDLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-29**	Batch ID: **43081**	RunNo: **57665**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1929875** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **1902323-004EMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **OW-29** Batch ID: **43081** RunNo: **57665**

Prep Date: **2/11/2019** Analysis Date: **2/12/2019** SeqNo: **1929875** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.001181	102	70	130	2.83	20	
Lead	0.012	0.00050	0.01250	0.0002233	97.0	70	130	2.17	20	
Selenium	0.026	0.0010	0.02500	0.0002358	101	70	130	1.78	20	
Thallium	0.012	0.00050	0.01250	0	96.5	70	130	2.41	20	

Sample ID: **MB-43081** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **PBW** Batch ID: **43081** RunNo: **57689**

Prep Date: **2/11/2019** Analysis Date: **2/13/2019** SeqNo: **1930867** Units: **mg/L**

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

Sample ID: **MSLLLCS-43081** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **BatchQC** Batch ID: **43081** RunNo: **57689**

Prep Date: **2/11/2019** Analysis Date: **2/13/2019** SeqNo: **1930869** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00046	0.00050	0.0005000	0	92.0	50	150			J

Sample ID: **MSLCS-43081** SampType: **LCS** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **LCSW** Batch ID: **43081** RunNo: **57689**

Prep Date: **2/11/2019** Analysis Date: **2/13/2019** SeqNo: **1930873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	93.1	85	115			

Sample ID: **1902323-004EMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **OW-29** Batch ID: **43081** RunNo: **57689**

Prep Date: **2/11/2019** Analysis Date: **2/13/2019** SeqNo: **1930876** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.061	0.0025	0.01250	0.04822	101	70	130			

Sample ID: **1902323-004EMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **OW-29** Batch ID: **43081** RunNo: **57689**

Prep Date: **2/11/2019** Analysis Date: **2/13/2019** SeqNo: **1930878** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.059	0.0025	0.01250	0.04822	88.1	70	130	2.74	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **MB-43081**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW**	Batch ID: **43081**	RunNo: **57756**
Prep Date: **2/11/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933500** Units: **mg/L**

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

Sample ID: **MSLLLCS-43081**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC**	Batch ID: **43081**	RunNo: **57756**
Prep Date: **2/11/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933502** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	105	50	150			

Sample ID: **MSLCS-43081**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW**	Batch ID: **43081**	RunNo: **57756**
Prep Date: **2/11/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	108	85	115			

Sample ID: **1902323-004EMSLL**	SampType: **MSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-29**	Batch ID: **43081**	RunNo: **57756**
Prep Date: **2/11/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933507** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0	112	70	130			

Sample ID: **1902323-004EMSDL**	SampType: **MSDLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-29**	Batch ID: **43081**	RunNo: **57756**
Prep Date: **2/11/2019**	Analysis Date: **2/15/2019**	SeqNo: **1933510** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0	112	70	130	0.223	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **MB-43101**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **43101**	RunNo: **57679**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1930398** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000068	0.00020								J

Sample ID: **LCS-43101**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **43101**	RunNo: **57679**
Prep Date: **2/11/2019**	Analysis Date: **2/12/2019**	SeqNo: **1930399** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.3	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **MB-43110**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **43110**	RunNo: **57696**
Prep Date: **2/13/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931031** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-43110**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **43110**	RunNo: **57696**
Prep Date: **2/13/2019**	Analysis Date: **2/13/2019**	SeqNo: **1931034** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.086	0.010	0.1000	0	86.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **LCS-43059**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.8	71.8	135			
Surr: DNOP	0.55		0.5000		110	70	130			

Sample ID: **MB-43059**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **43059**	RunNo: **57618**
Prep Date: **2/8/2019**	Analysis Date: **2/11/2019**	SeqNo: **1928121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928264** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		100	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G57625**	RunNo: **57625**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.54	0.050	0.5000	0	108	77.7	130			
Surr: BFB	25		20.00		123	72.8	125			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R57586**	RunNo: **57586**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927134** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	19	1.0	20.00	0	96.1	70	130			
Chlorobenzene	19	1.0	20.00	0	93.8	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57586**	RunNo: **57586**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927138** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**
27-Feb-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57586**	RunNo: **57586**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927138** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57586**	RunNo: **57586**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927138** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Sample ID: **1902323-003ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-14**	Batch ID: **R57586**	RunNo: **57586**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927321** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17000	50	1000	17230	-0.270	70	130			ES
Toluene	990	50	1000	11.80	98.0	70	130			
Chlorobenzene	980	50	1000	0	97.8	70	130			
1,1-Dichloroethene	1100	50	1000	0	110	67.6	130			
Trichloroethene (TCE)	1000	50	1000	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	530		500.0		107	70	130			
Surr: 4-Bromofluorobenzene	510		500.0		102	70	130			
Surr: Dibromofluoromethane	510		500.0		102	70	130			
Surr: Toluene-d8	480		500.0		96.0	70	130			

Sample ID: **1902323-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-14**	Batch ID: **R57586**	RunNo: **57586**
Prep Date:	Analysis Date: **2/8/2019**	SeqNo: **1927322** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16000	50	1000	17230	-131	70	130	7.88	20	ES
Toluene	910	50	1000	11.80	90.0	70	130	8.34	20	
Chlorobenzene	910	50	1000	0	90.7	70	130	7.58	20	
1,1-Dichloroethene	1000	50	1000	0	101	67.6	130	8.64	20	
Trichloroethene (TCE)	950	50	1000	0	95.0	70	130	9.84	20	
Surr: 1,2-Dichloroethane-d4	530		500.0		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	510		500.0		101	70	130	0	0	
Surr: Dibromofluoromethane	510		500.0		102	70	130	0	0	
Surr: Toluene-d8	480		500.0		95.7	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R57594**	RunNo: **57594**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928312** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	19	1.0	20.00	0	96.9	70	130			
Chlorobenzene	20	1.0	20.00	0	97.8	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.5	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.4		10.00		93.6	70	130			

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57594**	RunNo: **57594**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928316** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57594**	RunNo: **57594**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928316** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57594**	RunNo: **57594**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928316** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.4		10.00		93.9	70	130			

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **C57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928406** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	1.8	10								J
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **C57627**	RunNo: **57627**
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928406** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.21	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902323**

27-Feb-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Samples

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **C57627**	RunNo: **57627**							
Prep Date:	Analysis Date: **2/11/2019**	SeqNo: **1928406**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **C57627**	RunNo: **57627**							
Prep Date:	Analysis Date: **2/12/2019**	SeqNo: **1928407**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.6	70	130			
Toluene	18	1.0	20.00	0	88.1	70	130			
Chlorobenzene	17	1.0	20.00	0	86.9	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.9	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.8	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1902323 RcptNo: 1

Received By: Isaiah Ortiz 2/7/2019 12:15:00 PM I-OL

Completed By: Erin Melendrez 2/7/2019 3:17:07 PM

Reviewed By: LB. DAD 2/7/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☐	No ☑	
8. Was preservative added to bottles?	Yes ☑	No ☐	NA ☐ HNO3
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☑	No ☐	# of preserved bottles checked for pH: 8 (<2 or >12 unless noted)
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? YES
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DAD 2/7/19

Special Handling (if applicable)

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

Person Notified: ____ Date: ____

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

Regarding: ____

Client Instructions: ____

16. Additional remarks:

Trip blanks we're all received broken. For metals analysis added approx. 4mL HNO3 to sample 004Eto achieve acceptable pH. Held 24 hours prior to analysis.-DAD 2/7/19

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.5	Good	Yes			
2	1.8	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining SW

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush

Project Name:
2019 1st QTR GW SAMPLES

Project #:
OW-13,14,29

Project Manager:
Brian Moore

Sampler: CJohnson (CAJOHNSON1@marathonpetroleum.com)

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.5 1.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1902323	8260B + MTBE	8015D EXTENDED	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major CATIONS/ANIONS	8270		8011 FOR EDB							Air Bubbles (Y or N)
2/5/2019	1000	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-001	X														
2/5/2019	1000	AQUEOUS	TRIP BLANK	3-40ML VOAS	HCL	-002	X														
2/5/2019	1145	AQUEOUS	OW-14	MISC	MISC	-003	X	X	X	X				X							
2/5/2019	1448	AQUEOUS	OW-29	MISC	MISC	-004	X	X	X	X				X							
2/5/2019	1340	AQUEOUS	OW-13	MISC	MISC	-005	X	X	X	X				X							
2/5/2019	1346	AQUEOUS	DUPLICATE	MISC	MISC	-006	X	X	X	X				X							

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/7/19	1000			2/7/19	1215
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 20, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 1st QTR GW Sampling OrderNo.: 1902673

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 11 sample(s) on 2/14/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 7:00:00 AM
Lab ID: 1902673-001 **Matrix:** AQUEOUS **Received Date:** 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	0.31	0.17	1.0	J	µg/L	1	2/19/2019 11:28:27 AM	A57800
Toluene	0.27	0.17	1.0	J	µg/L	1	2/19/2019 11:28:27 AM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Naphthalene	0.38	0.29	2.0	J	µg/L	1	2/19/2019 11:28:27 AM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Acetone	2.8	0.76	10	J	µg/L	1	2/19/2019 11:28:27 AM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 11:28:27 AM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 11:28:27 AM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Chloroform	ND	0.24	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 11:28:27 AM	A57800

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 7:00:00 AM
Lab ID: 1902673-001 **Matrix:** AQUEOUS **Received Date:** 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 11:28:27 AM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 11:28:27 AM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 11:28:27 AM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 11:28:27 AM	A57800
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	2/19/2019 11:28:27 AM	A57800
Surr: 4-Bromofluorobenzene	96.8	0	70-130		%Rec	1	2/19/2019 11:28:27 AM	A57800
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	2/19/2019 11:28:27 AM	A57800
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	2/19/2019 11:28:27 AM	A57800

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 1:40:00 PM
Lab ID: 1902673-002
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/19/2019 4:43:40 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 4:43:40 PM	43211
Surr: DNOP	109	0	70-130		%Rec	1	2/19/2019 4:43:40 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	2/18/2019 2:03:35 PM	G57762
Surr: BFB	106	0	72.8-125		%Rec	1	2/18/2019 2:03:35 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/14/2019 9:00:49 PM	A57738
Chloride	2300	100	100		mg/L	200	2/27/2019 9:34:44 PM	R58008
Nitrogen, Nitrite (As N)	ND	1.4	2.0		mg/L	20	2/14/2019 9:13:13 PM	A57738
Bromide	3.7	0.068	0.50		mg/L	5	2/14/2019 9:00:49 PM	A57738
Nitrogen, Nitrate (As N)	27	0.14	0.50	*	mg/L	5	2/14/2019 9:00:49 PM	A57738
Phosphorus, Orthophosphate (As P)	0.44	0.13	2.5	J	mg/L	5	2/14/2019 9:00:49 PM	A57738
Sulfate	180	0.32	2.5		mg/L	5	2/14/2019 9:00:49 PM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.11	0.00065	0.0020		mg/L	1	2/18/2019 4:07:33 PM	A57777
Beryllium	ND	0.00028	0.0020		mg/L	1	2/18/2019 4:07:33 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:07:33 PM	A57777
Calcium	99	0.062	1.0		mg/L	1	2/18/2019 4:07:33 PM	A57777
Chromium	ND	0.0015	0.0060		mg/L	1	2/18/2019 4:07:33 PM	A57777
Copper	0.0053	0.0013	0.0060	J	mg/L	1	2/18/2019 4:07:33 PM	A57777
Iron	0.031	0.0087	0.020		mg/L	1	2/18/2019 4:07:33 PM	A57777
Magnesium	14	0.050	1.0		mg/L	1	2/18/2019 4:07:33 PM	A57777
Manganese	0.0024	0.00029	0.0020		mg/L	1	2/18/2019 4:07:33 PM	A57777
Potassium	4.9	0.16	1.0		mg/L	1	2/18/2019 4:07:33 PM	A57777
Silver	0.0017	0.00094	0.0050	J	mg/L	1	2/18/2019 4:07:33 PM	A57777
Sodium	1400	8.3	20		mg/L	20	2/18/2019 7:23:00 PM	A57777
Zinc	0.029	0.0023	0.010		mg/L	1	2/18/2019 4:07:33 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.13	0.00065	0.0020		mg/L	1	2/28/2019 4:21:34 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 4:21:34 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 4:21:34 PM	43338
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 4:21:34 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 4:21:34 PM	43338
Iron	0.25	0.0087	0.020		mg/L	1	2/28/2019 4:21:34 PM	43338
Manganese	0.0077	0.00029	0.0020		mg/L	1	2/28/2019 4:21:34 PM	43338
Silver	0.0026	0.0014	0.0050	J	mg/L	1	2/28/2019 4:21:34 PM	43338

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 1:40:00 PM
Lab ID: 1902673-002
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.0064	0.0058	0.010	J	mg/L	1	2/28/2019 4:21:34 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.0014	0.0010	0.0050	J	mg/L	5	2/22/2019 1:07:27 PM	A57901
Arsenic	0.0021	0.000068	0.0010		mg/L	1	2/20/2019 7:33:27 PM	B57846
Lead	ND	0.000047	0.00050		mg/L	1	2/20/2019 7:33:27 PM	B57846
Selenium	0.0047	0.00020	0.0010		mg/L	1	2/20/2019 7:33:27 PM	B57846
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 7:33:27 PM	B57846
Uranium	0.035	0.00015	0.0025	*	mg/L	5	2/22/2019 1:07:27 PM	A57901
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00034	0.00020	0.0010	J	mg/L	1	2/21/2019 7:29:18 PM	43267
Arsenic	0.0027	0.00031	0.0010		mg/L	1	2/21/2019 7:29:18 PM	43267
Lead	0.00031	0.000047	0.00050	J	mg/L	1	2/21/2019 7:29:18 PM	43267
Selenium	0.0051	0.00048	0.0010		mg/L	1	2/21/2019 7:29:18 PM	43267
Thallium	0.000055	0.000052	0.00050	J	mg/L	1	2/21/2019 7:29:18 PM	43267
Uranium	0.031	0.00042	0.0025	*	mg/L	5	2/22/2019 10:13:59 AM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	2/27/2019 3:37:52 PM	43375
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Naphthalene	ND	0.29	2.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Acetone	2.1	0.76	10	J	µg/L	1	2/19/2019 11:57:50 AM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 11:57:50 AM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 11:57:50 AM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 1:40:00 PM
Lab ID: 1902673-002
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Chloroform	ND	0.24	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 11:57:50 AM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 11:57:50 AM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 1:40:00 PM
Lab ID: 1902673-002
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 11:57:50 AM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 11:57:50 AM	A57800
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	2/19/2019 11:57:50 AM	A57800
Surr: 4-Bromofluorobenzene	95.2	0	70-130		%Rec	1	2/19/2019 11:57:50 AM	A57800
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	2/19/2019 11:57:50 AM	A57800
Surr: Toluene-d8	95.7	0	70-130		%Rec	1	2/19/2019 11:57:50 AM	A57800

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:10:00 PM
Lab ID: 1902673-003
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/19/2019 5:07:57 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 5:07:57 PM	43211
Surr: DNOP	112	0	70-130		%Rec	1	2/19/2019 5:07:57 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.022	0.021	0.050	J	mg/L	1	2/18/2019 2:26:22 PM	G57762
Surr: BFB	101	0	72.8-125		%Rec	1	2/18/2019 2:26:22 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/14/2019 9:50:27 PM	A57738
Chloride	1500	100	100		mg/L	200	2/27/2019 9:47:08 PM	R58008
Nitrogen, Nitrite (As N)	0.35	0.35	0.50	J	mg/L	5	2/14/2019 9:50:27 PM	A57738
Bromide	0.84	0.068	0.50		mg/L	5	2/14/2019 9:50:27 PM	A57738
Nitrogen, Nitrate (As N)	9.9	0.14	0.50		mg/L	5	2/14/2019 9:50:27 PM	A57738
Phosphorus, Orthophosphate (As P)	0.86	0.13	2.5	J	mg/L	5	2/14/2019 9:50:27 PM	A57738
Sulfate	89	0.32	2.5		mg/L	5	2/14/2019 9:50:27 PM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.23	0.00065	0.0020		mg/L	1	2/18/2019 4:11:50 PM	A57777
Beryllium	ND	0.00028	0.0020		mg/L	1	2/18/2019 4:11:50 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:11:50 PM	A57777
Calcium	120	0.31	5.0		mg/L	5	2/18/2019 4:14:00 PM	A57777
Chromium	0.0080	0.0015	0.0060		mg/L	1	2/18/2019 4:11:50 PM	A57777
Copper	0.0034	0.0013	0.0060	J	mg/L	1	2/18/2019 4:11:50 PM	A57777
Iron	0.025	0.0087	0.020		mg/L	1	2/18/2019 4:11:50 PM	A57777
Magnesium	2.5	0.050	1.0		mg/L	1	2/18/2019 4:11:50 PM	A57777
Manganese	0.0027	0.00029	0.0020		mg/L	1	2/18/2019 4:11:50 PM	A57777
Potassium	2.8	0.16	1.0		mg/L	1	2/18/2019 4:11:50 PM	A57777
Silver	0.0021	0.00094	0.0050	J	mg/L	1	2/18/2019 4:11:50 PM	A57777
Sodium	1000	8.3	20		mg/L	20	2/18/2019 7:25:03 PM	A57777
Zinc	0.018	0.0023	0.010		mg/L	1	2/18/2019 4:11:50 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.30	0.00065	0.0020		mg/L	1	2/28/2019 4:23:43 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 4:23:43 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 4:23:43 PM	43338
Chromium	0.018	0.0015	0.0060		mg/L	1	2/28/2019 4:23:43 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 4:23:43 PM	43338
Iron	6.7	0.087	0.20	*	mg/L	10	2/28/2019 4:25:43 PM	43338
Manganese	0.14	0.00029	0.0020	*	mg/L	1	2/28/2019 4:23:43 PM	43338
Silver	0.0021	0.0014	0.0050	J	mg/L	1	2/28/2019 4:23:43 PM	43338

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:10:00 PM
Lab ID: 1902673-003
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.026	0.0058	0.010		mg/L	1	2/28/2019 4:23:43 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 1:12:17 PM	A57901
Arsenic	0.0022	0.000068	0.0010		mg/L	1	2/20/2019 7:35:52 PM	B57846
Lead	0.000097	0.000047	0.00050	J	mg/L	1	2/20/2019 7:35:52 PM	B57846
Selenium	0.0081	0.00020	0.0010		mg/L	1	2/20/2019 7:35:52 PM	B57846
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 7:35:52 PM	B57846
Uranium	0.13	0.00030	0.0050	*	mg/L	10	2/22/2019 1:55:55 PM	A57901
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00039	0.00020	0.0010	J	mg/L	1	2/21/2019 7:31:15 PM	43267
Arsenic	0.0050	0.00031	0.0010		mg/L	1	2/21/2019 7:31:15 PM	43267
Lead	0.0074	0.000047	0.00050		mg/L	1	2/21/2019 7:31:15 PM	43267
Selenium	0.0090	0.00048	0.0010		mg/L	1	2/21/2019 7:31:15 PM	43267
Thallium	0.00016	0.000052	0.00050	J	mg/L	1	2/21/2019 7:31:15 PM	43267
Uranium	0.12	0.00085	0.0050	*	mg/L	10	2/22/2019 10:15:55 AM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000061	0.000038	0.00020	J	mg/L	1	2/27/2019 3:40:06 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Benzoic acid	6.7	6.3	20	J	µg/L	1	3/4/2019 12:00:20 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/4/2019 12:00:20 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:10:00 PM
Lab ID: 1902673-003
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 12:00:20 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 12:00:20 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 12:00:20 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 12:00:20 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 12:00:20 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 12:00:20 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 12:00:20 PM	43262
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 12:00:20 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 12:00:20 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 12:00:20 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 12:00:20 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 12:00:20 PM	43262

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:10:00 PM
Lab ID: 1902673-003
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 12:00:20 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 12:00:20 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 12:00:20 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 12:00:20 PM	43262
Surr: 2-Fluorophenol	47.6	0	15-101		%Rec	1	3/4/2019 12:00:20 PM	43262
Surr: Phenol-d5	35.4	0	15-84.6		%Rec	1	3/4/2019 12:00:20 PM	43262
Surr: 2,4,6-Tribromophenol	82.1	0	27.8-112		%Rec	1	3/4/2019 12:00:20 PM	43262
Surr: Nitrobenzene-d5	62.1	0	33-113		%Rec	1	3/4/2019 12:00:20 PM	43262
Surr: 2-Fluorobiphenyl	53.0	0	26.6-107		%Rec	1	3/4/2019 12:00:20 PM	43262
Surr: 4-Terphenyl-d14	105	0	18.7-148		%Rec	1	3/4/2019 12:00:20 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Naphthalene	ND	0.29	2.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Acetone	1.4	0.76	10	J	µg/L	1	2/19/2019 12:27:13 PM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 12:27:13 PM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 12:27:13 PM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:10:00 PM
Lab ID: 1902673-003
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Chloroform	ND	0.24	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 12:27:13 PM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 12:27:13 PM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:10:00 PM
Lab ID: 1902673-003
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 12:27:13 PM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 12:27:13 PM	A57800
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	2/19/2019 12:27:13 PM	A57800
Surr: 4-Bromofluorobenzene	98.1	0	70-130		%Rec	1	2/19/2019 12:27:13 PM	A57800
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	2/19/2019 12:27:13 PM	A57800
Surr: Toluene-d8	100	0	70-130		%Rec	1	2/19/2019 12:27:13 PM	A57800

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:40:00 PM
Lab ID: 1902673-004 **Matrix:** AQUEOUS **Received Date:** 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/19/2019 5:32:10 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 5:32:10 PM	43211
Surr: DNOP	114	0	70-130		%Rec	1	2/19/2019 5:32:10 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	2/18/2019 2:49:01 PM	G57762
Surr: BFB	101	0	72.8-125		%Rec	1	2/18/2019 2:49:01 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/14/2019 10:15:16 PM	A57738
Chloride	4300	250	250		mg/L	500	2/27/2019 9:59:32 PM	R58008
Nitrogen, Nitrite (As N)	ND	1.4	2.0		mg/L	20	2/14/2019 10:27:41 PM	A57738
Bromide	2.0	0.068	0.50		mg/L	5	2/14/2019 10:15:16 PM	A57738
Nitrogen, Nitrate (As N)	22	0.14	0.50	*	mg/L	5	2/14/2019 10:15:16 PM	A57738
Phosphorus, Orthophosphate (As P)	0.84	0.13	2.5	J	mg/L	5	2/14/2019 10:15:16 PM	A57738
Sulfate	410	1.3	10		mg/L	20	2/14/2019 10:27:41 PM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.094	0.00065	0.0020		mg/L	1	2/18/2019 4:16:08 PM	A57777
Beryllium	0.00038	0.00028	0.0020	J	mg/L	1	2/18/2019 4:16:08 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:16:08 PM	A57777
Calcium	660	1.2	20		mg/L	20	2/18/2019 7:27:18 PM	A57777
Chromium	ND	0.0015	0.0060		mg/L	1	2/18/2019 4:16:08 PM	A57777
Copper	0.0056	0.0013	0.0060	J	mg/L	1	2/18/2019 4:16:08 PM	A57777
Iron	0.011	0.0087	0.020	J	mg/L	1	2/18/2019 4:16:08 PM	A57777
Magnesium	110	0.25	5.0		mg/L	5	2/18/2019 4:18:25 PM	A57777
Manganese	0.30	0.00029	0.0020	*	mg/L	1	2/18/2019 4:16:08 PM	A57777
Potassium	4.4	0.16	1.0		mg/L	1	2/18/2019 4:16:08 PM	A57777
Silver	0.012	0.00094	0.0050		mg/L	1	2/18/2019 4:16:08 PM	A57777
Sodium	1900	8.3	20		mg/L	20	2/18/2019 7:27:18 PM	A57777
Zinc	0.020	0.0023	0.010		mg/L	1	2/18/2019 4:16:08 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.12	0.00065	0.0020		mg/L	1	2/28/2019 4:27:48 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 4:27:48 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 4:27:48 PM	43338
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 4:27:48 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 4:27:48 PM	43338
Iron	1.7	0.044	0.10	*	mg/L	5	2/28/2019 4:43:12 PM	43338
Manganese	1.1	0.0014	0.010	*	mg/L	5	2/28/2019 4:43:12 PM	43338
Silver	0.016	0.0014	0.0050		mg/L	1	2/28/2019 4:27:48 PM	43338

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:40:00 PM
Lab ID: 1902673-004
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.0077	0.0058	0.010	J	mg/L	1	2/28/2019 4:27:48 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 1:22:00 PM	A57901
Arsenic	0.0015	0.00034	0.0050	J	mg/L	5	2/22/2019 1:22:00 PM	A57901
Lead	ND	0.000047	0.00050		mg/L	1	2/20/2019 7:45:30 PM	C57846
Selenium	ND	0.0010	0.0050		mg/L	5	2/22/2019 1:22:00 PM	A57901
Thallium	0.000037	0.000032	0.00050	J	mg/L	1	2/20/2019 7:45:30 PM	C57846
Uranium	0.046	0.00015	0.0025	*	mg/L	5	2/22/2019 1:22:00 PM	A57901
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 10:17:52 AM	43267
Arsenic	0.0039	0.0016	0.0050	J	mg/L	5	2/22/2019 10:17:52 AM	43267
Lead	0.0017	0.00024	0.0025	J	mg/L	5	2/22/2019 10:17:52 AM	43267
Selenium	ND	0.0024	0.0050		mg/L	5	2/22/2019 10:17:52 AM	43267
Thallium	ND	0.00026	0.0025		mg/L	5	2/22/2019 10:17:52 AM	43267
Uranium	0.057	0.00042	0.0025	*	mg/L	5	2/22/2019 10:17:52 AM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000091	0.000038	0.00020	J	mg/L	1	2/27/2019 3:42:19 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Benzoic acid	8.5	6.3	20	J	µg/L	1	3/4/2019 12:29:40 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/4/2019 12:29:40 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:40:00 PM
Lab ID: 1902673-004
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 12:29:40 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 12:29:40 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 12:29:40 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 12:29:40 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 12:29:40 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 12:29:40 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 12:29:40 PM	43262
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 12:29:40 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 12:29:40 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 12:29:40 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 12:29:40 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 12:29:40 PM	43262

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:40:00 PM
Lab ID: 1902673-004 **Matrix:** AQUEOUS **Received Date:** 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 12:29:40 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 12:29:40 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 12:29:40 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 12:29:40 PM	43262
Surr: 2-Fluorophenol	4.68	0	15-101	S	%Rec	1	3/4/2019 12:29:40 PM	43262
Surr: Phenol-d5	9.82	0	15-84.6	S	%Rec	1	3/4/2019 12:29:40 PM	43262
Surr: 2,4,6-Tribromophenol	6.37	0	27.8-112	S	%Rec	1	3/4/2019 12:29:40 PM	43262
Surr: Nitrobenzene-d5	64.0	0	33-113		%Rec	1	3/4/2019 12:29:40 PM	43262
Surr: 2-Fluorobiphenyl	57.6	0	26.6-107		%Rec	1	3/4/2019 12:29:40 PM	43262
Surr: 4-Terphenyl-d14	97.7	0	18.7-148		%Rec	1	3/4/2019 12:29:40 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Naphthalene	ND	0.29	2.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Acetone	2.1	0.76	10	J	µg/L	1	2/19/2019 12:56:38 PM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 12:56:38 PM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 12:56:38 PM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800

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Qualifiers:

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PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:40:00 PM
Lab ID: 1902673-004
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Chloroform	0.78	0.24	1.0	J	µg/L	1	2/19/2019 12:56:38 PM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 12:56:38 PM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 12:56:38 PM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:40:00 PM
Lab ID: 1902673-004
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 12:56:38 PM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 12:56:38 PM	A57800
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	2/19/2019 12:56:38 PM	A57800
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	2/19/2019 12:56:38 PM	A57800
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	2/19/2019 12:56:38 PM	A57800
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	2/19/2019 12:56:38 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLIACATE
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:50:00 PM
Lab ID: 1902673-005
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/19/2019 5:56:19 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 5:56:19 PM	43211
Surr: DNOP	113	0	70-130		%Rec	1	2/19/2019 5:56:19 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	2/18/2019 3:11:48 PM	G57762
Surr: BFB	99.3	0	72.8-125		%Rec	1	2/18/2019 3:11:48 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/14/2019 10:40:05 PM	A57738
Chloride	4800	250	250		mg/L	500	2/27/2019 10:11:57 PM	R58008
Nitrogen, Nitrite (As N)	ND	1.4	2.0		mg/L	20	2/14/2019 10:52:29 PM	A57738
Bromide	2.5	0.27	2.0		mg/L	20	2/14/2019 10:52:29 PM	A57738
Nitrogen, Nitrate (As N)	18	0.57	2.0	*	mg/L	20	2/14/2019 10:52:29 PM	A57738
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/14/2019 10:40:05 PM	A57738
Sulfate	470	1.3	10		mg/L	20	2/14/2019 10:52:29 PM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.082	0.00065	0.0020		mg/L	1	2/18/2019 4:27:06 PM	A57777
Beryllium	0.00045	0.00028	0.0020	J	mg/L	1	2/18/2019 4:27:06 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:27:06 PM	A57777
Calcium	680	1.2	20		mg/L	20	2/18/2019 7:31:55 PM	A57777
Chromium	ND	0.0015	0.0060		mg/L	1	2/18/2019 4:27:06 PM	A57777
Copper	0.0057	0.0013	0.0060	J	mg/L	1	2/18/2019 4:27:06 PM	A57777
Iron	0.059	0.0087	0.020		mg/L	1	2/18/2019 4:27:06 PM	A57777
Magnesium	110	0.25	5.0		mg/L	5	2/18/2019 4:29:30 PM	A57777
Manganese	0.46	0.00029	0.0020	*	mg/L	1	2/18/2019 4:27:06 PM	A57777
Potassium	4.1	0.16	1.0		mg/L	1	2/18/2019 4:27:06 PM	A57777
Silver	0.012	0.00094	0.0050		mg/L	1	2/18/2019 4:27:06 PM	A57777
Sodium	2200	21	50		mg/L	50	2/18/2019 7:34:16 PM	A57777
Zinc	0.016	0.0023	0.010		mg/L	1	2/18/2019 4:27:06 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.13	0.00065	0.0020		mg/L	1	2/28/2019 4:49:41 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 4:49:41 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 4:49:41 PM	43338
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 4:49:41 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 4:49:41 PM	43338
Iron	2.9	0.044	0.10	*	mg/L	5	2/28/2019 4:51:47 PM	43338
Manganese	1.2	0.0014	0.010	*	mg/L	5	2/28/2019 4:51:47 PM	43338
Silver	0.015	0.0014	0.0050		mg/L	1	2/28/2019 4:49:41 PM	43338

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EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.010	0.0058	0.010		mg/L	1	2/28/2019 4:49:41 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 1:26:50 PM	A57901
Arsenic	0.0017	0.00034	0.0050	J	mg/L	5	2/22/2019 1:26:50 PM	A57901
Lead	0.00014	0.000047	0.00050	J	mg/L	1	2/20/2019 7:47:55 PM	C57846
Selenium	ND	0.0010	0.0050		mg/L	5	2/22/2019 1:26:50 PM	A57901
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 7:47:55 PM	C57846
Uranium	0.050	0.00015	0.0025	*	mg/L	5	2/22/2019 1:26:50 PM	A57901
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 10:19:49 AM	43267
Arsenic	0.0036	0.0016	0.0050	J	mg/L	5	2/22/2019 10:19:49 AM	43267
Lead	0.0030	0.00024	0.0025		mg/L	5	2/22/2019 10:19:49 AM	43267
Selenium	ND	0.0024	0.0050		mg/L	5	2/22/2019 10:19:49 AM	43267
Thallium	ND	0.00026	0.0025		mg/L	5	2/22/2019 10:19:49 AM	43267
Uranium	0.047	0.00042	0.0025	*	mg/L	5	2/22/2019 10:19:49 AM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000075	0.000038	0.00020	J	mg/L	1	2/27/2019 3:44:33 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Benzoic acid	13	6.3	20	J	µg/L	1	3/4/2019 12:59:00 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Bis(2-ethylhexyl)phthalate	8.3	8.1	10	J	µg/L	1	3/4/2019 12:59:00 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 12:59:00 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 12:59:00 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 12:59:00 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 12:59:00 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 12:59:00 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 12:59:00 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 12:59:00 PM	43262
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 12:59:00 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 12:59:00 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 12:59:00 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 12:59:00 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 12:59:00 PM	43262

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EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 12:59:00 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 12:59:00 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 12:59:00 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 12:59:00 PM	43262
Surr: 2-Fluorophenol	16.1	0	15-101		%Rec	1	3/4/2019 12:59:00 PM	43262
Surr: Phenol-d5	19.6	0	15-84.6		%Rec	1	3/4/2019 12:59:00 PM	43262
Surr: 2,4,6-Tribromophenol	12.0	0	27.8-112	S	%Rec	1	3/4/2019 12:59:00 PM	43262
Surr: Nitrobenzene-d5	38.5	0	33-113		%Rec	1	3/4/2019 12:59:00 PM	43262
Surr: 2-Fluorobiphenyl	30.6	0	26.6-107		%Rec	1	3/4/2019 12:59:00 PM	43262
Surr: 4-Terphenyl-d14	68.6	0	18.7-148		%Rec	1	3/4/2019 12:59:00 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Naphthalene	ND	0.29	2.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Acetone	2.7	0.76	10	J	µg/L	1	2/19/2019 2:54:46 PM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 2:54:46 PM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 2:54:46 PM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800

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EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Chloroform	0.77	0.24	1.0	J	µg/L	1	2/19/2019 2:54:46 PM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 2:54:46 PM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 2:54:46 PM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLIACATE
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 2:50:00 PM
Lab ID: 1902673-005
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 2:54:46 PM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 2:54:46 PM	A57800
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	1	2/19/2019 2:54:46 PM	A57800
Surr: 4-Bromofluorobenzene	93.2	0	70-130		%Rec	1	2/19/2019 2:54:46 PM	A57800
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	2/19/2019 2:54:46 PM	A57800
Surr: Toluene-d8	95.9	0	70-130		%Rec	1	2/19/2019 2:54:46 PM	A57800

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:10:00 PM
Lab ID: 1902673-006
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.29	0.033	0.094		µg/L	10	2/20/2019 9:48:16 AM	43226
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	67	0.35	1.0		mg/L	1	2/19/2019 6:20:16 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 6:20:16 PM	43211
Surr: DNOP	114	0	70-130		%Rec	1	2/19/2019 6:20:16 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.34	0.021	0.050		mg/L	1	2/18/2019 3:34:37 PM	G57762
Surr: BFB	118	0	72.8-125		%Rec	1	2/18/2019 3:34:37 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.0	0.25	0.50		mg/L	5	2/14/2019 11:04:53 PM	A57738
Chloride	1100	50	50		mg/L	100	2/27/2019 10:24:22 PM	R58008
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/14/2019 11:04:53 PM	A57738
Bromide	1.4	0.068	0.50		mg/L	5	2/14/2019 11:04:53 PM	A57738
Nitrogen, Nitrate (As N)	0.15	0.14	0.50	J	mg/L	5	2/14/2019 11:04:53 PM	A57738
Phosphorus, Orthophosphate (As P)	0.22	0.13	2.5	J	mg/L	5	2/14/2019 11:04:53 PM	A57738
Sulfate	87	0.32	2.5		mg/L	5	2/14/2019 11:04:53 PM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.057	0.00065	0.0020		mg/L	1	2/18/2019 4:31:39 PM	A57777
Beryllium	ND	0.00028	0.0020		mg/L	1	2/18/2019 4:31:39 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:31:39 PM	A57777
Calcium	24	0.062	1.0		mg/L	1	2/18/2019 4:31:39 PM	A57777
Chromium	ND	0.0015	0.0060		mg/L	1	2/18/2019 4:31:39 PM	A57777
Copper	0.0034	0.0013	0.0060	J	mg/L	1	2/18/2019 4:31:39 PM	A57777
Iron	ND	0.0087	0.020		mg/L	1	2/18/2019 4:31:39 PM	A57777
Magnesium	2.9	0.050	1.0		mg/L	1	2/18/2019 4:31:39 PM	A57777
Manganese	0.044	0.00029	0.0020		mg/L	1	2/18/2019 4:31:39 PM	A57777
Potassium	1.5	0.16	1.0		mg/L	1	2/18/2019 4:31:39 PM	A57777
Silver	ND	0.00094	0.0050		mg/L	1	2/18/2019 4:31:39 PM	A57777
Sodium	740	8.3	20		mg/L	20	2/18/2019 7:36:31 PM	A57777
Zinc	0.016	0.0023	0.010		mg/L	1	2/18/2019 4:31:39 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.067	0.00065	0.0020		mg/L	1	2/28/2019 4:53:54 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 4:53:54 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 4:53:54 PM	43338
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 4:53:54 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 4:53:54 PM	43338
Iron	0.17	0.0087	0.020		mg/L	1	2/28/2019 4:53:54 PM	43338

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:10:00 PM
Lab ID: 1902673-006
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Manganese	0.055	0.00029	0.0020	*	mg/L	1	2/28/2019 4:53:54 PM	43338
Silver	ND	0.0014	0.0050		mg/L	1	2/28/2019 4:53:54 PM	43338
Zinc	ND	0.0058	0.010		mg/L	1	2/28/2019 4:53:54 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00028	0.00020	0.0010	J	mg/L	1	2/22/2019 1:31:40 PM	A57901
Arsenic	0.0014	0.000068	0.0010		mg/L	1	2/20/2019 8:00:02 PM	C57846
Lead	ND	0.000047	0.00050		mg/L	1	2/20/2019 8:00:02 PM	C57846
Selenium	0.0012	0.00020	0.0010		mg/L	1	2/20/2019 8:00:02 PM	C57846
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 8:00:02 PM	C57846
Uranium	0.016	0.000030	0.00050		mg/L	1	2/22/2019 1:31:40 PM	A57901
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00022	0.00020	0.0010	J	mg/L	1	2/21/2019 7:44:55 PM	43267
Arsenic	0.0015	0.00031	0.0010		mg/L	1	2/21/2019 7:44:55 PM	43267
Lead	0.00037	0.000047	0.00050	J	mg/L	1	2/21/2019 7:44:55 PM	43267
Selenium	0.0011	0.00048	0.0010		mg/L	1	2/21/2019 7:44:55 PM	43267
Thallium	ND	0.000052	0.00050		mg/L	1	2/21/2019 7:44:55 PM	43267
Uranium	0.016	0.000085	0.00050		mg/L	1	2/21/2019 7:44:55 PM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	2/27/2019 3:46:47 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Benzoic acid	16	6.3	20	J	µg/L	1	3/4/2019 1:28:32 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/4/2019 1:28:32 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 1:28:32 PM	43262

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:10:00 PM
Lab ID: 1902673-006
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 1:28:32 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 1:28:32 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 1:28:32 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 1:28:32 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 1:28:32 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 1:28:32 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 1:28:32 PM	43262
1-Methylnaphthalene	41	7.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2-Methylnaphthalene	48	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 1:28:32 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 1:28:32 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 1:28:32 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 1:28:32 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 1:28:32 PM	43262

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:10:00 PM
Lab ID: 1902673-006
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 1:28:32 PM	43262
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 1:28:32 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 1:28:32 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 1:28:32 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 1:28:32 PM	43262
Surr: 2-Fluorophenol	60.3	0	15-101		%Rec	1	3/4/2019 1:28:32 PM	43262
Surr: Phenol-d5	41.5	0	15-84.6		%Rec	1	3/4/2019 1:28:32 PM	43262
Surr: 2,4,6-Tribromophenol	75.7	0	27.8-112		%Rec	1	3/4/2019 1:28:32 PM	43262
Surr: Nitrobenzene-d5	85.3	0	33-113		%Rec	1	3/4/2019 1:28:32 PM	43262
Surr: 2-Fluorobiphenyl	51.1	0	26.6-107		%Rec	1	3/4/2019 1:28:32 PM	43262
Surr: 4-Terphenyl-d14	101	0	18.7-148		%Rec	1	3/4/2019 1:28:32 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	17	0.35	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Toluene	0.87	0.34	1.0	J	µg/L	2	2/19/2019 3:53:33 PM	A57800
Ethylbenzene	3.1	0.45	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Methyl tert-butyl ether (MTBE)	4.4	0.91	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2,4-Trimethylbenzene	22	0.51	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,3,5-Trimethylbenzene	8.1	0.46	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2-Dichloroethane (EDC)	2.3	0.38	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.46	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Naphthalene	57	0.58	2.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1-Methylnaphthalene	11	0.67	4.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
2-Methylnaphthalene	15	0.69	4.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Acetone	14	1.5	10		µg/L	2	2/19/2019 3:53:33 PM	A57800
Bromobenzene	ND	0.64	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Bromodichloromethane	ND	0.57	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Bromoform	ND	0.65	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Bromomethane	ND	0.55	3.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
2-Butanone	3.2	2.8	10	J	µg/L	2	2/19/2019 3:53:33 PM	A57800

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:10:00 PM
Lab ID: 1902673-006
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Carbon disulfide	ND	0.77	10		µg/L	2	2/19/2019 3:53:33 PM	A57800
Carbon Tetrachloride	ND	0.27	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Chlorobenzene	ND	0.58	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Chloroethane	ND	0.33	2.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Chloroform	ND	0.47	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Chloromethane	ND	0.64	3.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
2-Chlorotoluene	ND	0.50	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
4-Chlorotoluene	ND	0.56	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
cis-1,2-DCE	ND	0.75	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
cis-1,3-Dichloropropene	ND	0.60	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.94	2.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Dibromochloromethane	ND	0.47	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Dibromomethane	ND	0.64	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2-Dichlorobenzene	ND	0.62	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,3-Dichlorobenzene	ND	0.63	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,4-Dichlorobenzene	ND	0.58	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Dichlorodifluoromethane	ND	0.52	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,1-Dichloroethane	0.69	0.35	1.0	J	µg/L	2	2/19/2019 3:53:33 PM	A57800
1,1-Dichloroethene	0.50	0.24	1.0	J	µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2-Dichloropropane	ND	0.33	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,3-Dichloropropane	ND	0.54	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
2,2-Dichloropropane	ND	0.47	2.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,1-Dichloropropene	ND	0.33	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Hexachlorobutadiene	ND	0.78	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
2-Hexanone	ND	1.8	10		µg/L	2	2/19/2019 3:53:33 PM	A57800
Isopropylbenzene	1.1	0.44	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
4-Isopropyltoluene	0.78	0.48	1.0	J	µg/L	2	2/19/2019 3:53:33 PM	A57800
4-Methyl-2-pentanone	6.6	0.91	10	J	µg/L	2	2/19/2019 3:53:33 PM	A57800
Methylene Chloride	ND	0.41	3.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
n-Butylbenzene	ND	0.50	3.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
n-Propylbenzene	1.1	0.49	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
sec-Butylbenzene	ND	0.40	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Styrene	ND	0.50	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
tert-Butylbenzene	ND	0.44	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.50	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.66	2.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Tetrachloroethene (PCE)	ND	0.30	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
trans-1,2-DCE	ND	0.36	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
trans-1,3-Dichloropropene	ND	0.55	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:10:00 PM
Lab ID: 1902673-006
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2,3-Trichlorobenzene	ND	0.56	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2,4-Trichlorobenzene	ND	0.53	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,1,1-Trichloroethane	ND	0.33	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,1,2-Trichloroethane	ND	0.47	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Trichloroethene (TCE)	ND	0.52	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Trichlorofluoromethane	ND	0.29	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
1,2,3-Trichloropropane	ND	1.1	2.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Vinyl chloride	ND	0.24	1.0		µg/L	2	2/19/2019 3:53:33 PM	A57800
Xylenes, Total	51	1.3	1.5		µg/L	2	2/19/2019 3:53:33 PM	A57800
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	2	2/19/2019 3:53:33 PM	A57800
Surr: 4-Bromofluorobenzene	99.1	0	70-130		%Rec	2	2/19/2019 3:53:33 PM	A57800
Surr: Dibromofluoromethane	106	0	70-130		%Rec	2	2/19/2019 3:53:33 PM	A57800
Surr: Toluene-d8	97.0	0	70-130		%Rec	2	2/19/2019 3:53:33 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:38:00 PM
Lab ID: 1902673-007
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	2/19/2019 10:42:27 PM	43226
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/19/2019 6:44:19 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 6:44:19 PM	43211
Surr: DNOP	121	0	70-130		%Rec	1	2/19/2019 6:44:19 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.43	0.021	0.050		mg/L	1	2/18/2019 4:20:13 PM	G57762
Surr: BFB	96.7	0	72.8-125		%Rec	1	2/18/2019 4:20:13 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.29	0.25	0.50	J	mg/L	5	2/14/2019 11:29:42 PM	A57738
Chloride	420	25	25		mg/L	50	2/27/2019 10:36:47 PM	R58008
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/14/2019 11:29:42 PM	A57738
Bromide	1.1	0.068	0.50		mg/L	5	2/14/2019 11:29:42 PM	A57738
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/14/2019 11:29:42 PM	A57738
Phosphorus, Orthophosphate (As P)	0.99	0.13	2.5	J	mg/L	5	2/14/2019 11:29:42 PM	A57738
Sulfate	89	0.32	2.5		mg/L	5	2/14/2019 11:29:42 PM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.047	0.00065	0.0020		mg/L	1	2/18/2019 4:35:39 PM	A57777
Beryllium	ND	0.00028	0.0020		mg/L	1	2/18/2019 4:35:39 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:35:39 PM	A57777
Calcium	27	0.062	1.0		mg/L	1	2/18/2019 4:35:39 PM	A57777
Chromium	ND	0.0015	0.0060		mg/L	1	2/18/2019 4:35:39 PM	A57777
Copper	0.0045	0.0013	0.0060	J	mg/L	1	2/18/2019 4:35:39 PM	A57777
Iron	ND	0.0087	0.020		mg/L	1	2/18/2019 4:35:39 PM	A57777
Magnesium	5.0	0.050	1.0		mg/L	1	2/18/2019 4:35:39 PM	A57777
Manganese	0.059	0.00029	0.0020	*	mg/L	1	2/18/2019 4:35:39 PM	A57777
Potassium	0.48	0.16	1.0	J	mg/L	1	2/18/2019 4:35:39 PM	A57777
Silver	ND	0.00094	0.0050		mg/L	1	2/18/2019 4:35:39 PM	A57777
Sodium	570	8.3	20		mg/L	20	2/18/2019 7:38:45 PM	A57777
Zinc	0.027	0.0023	0.010		mg/L	1	2/18/2019 4:35:39 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.056	0.00065	0.0020		mg/L	1	2/28/2019 4:55:57 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 4:55:57 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 4:55:57 PM	43338
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 4:55:57 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 4:55:57 PM	43338
Iron	0.17	0.0087	0.020		mg/L	1	2/28/2019 4:55:57 PM	43338

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:38:00 PM
Lab ID: 1902673-007
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Manganese	0.079	0.00029	0.0020	*	mg/L	1	2/28/2019 4:55:57 PM	43338
Silver	ND	0.0014	0.0050		mg/L	1	2/28/2019 4:55:57 PM	43338
Zinc	ND	0.0058	0.010		mg/L	1	2/28/2019 4:55:57 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00034	0.00020	0.0010	J	mg/L	1	2/22/2019 1:36:30 PM	A57901
Arsenic	0.0021	0.000068	0.0010		mg/L	1	2/20/2019 8:04:51 PM	C57846
Lead	0.00011	0.000047	0.00050	J	mg/L	1	2/20/2019 8:04:51 PM	C57846
Selenium	0.00043	0.00020	0.0010	J	mg/L	1	2/20/2019 8:04:51 PM	C57846
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 8:04:51 PM	C57846
Uranium	0.058	0.00015	0.0025	*	mg/L	5	2/22/2019 1:34:05 PM	A57901
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00032	0.00020	0.0010	J	mg/L	1	2/21/2019 7:46:52 PM	43267
Arsenic	0.0024	0.00031	0.0010		mg/L	1	2/21/2019 7:46:52 PM	43267
Lead	0.00031	0.000047	0.00050	J	mg/L	1	2/21/2019 7:46:52 PM	43267
Selenium	ND	0.00048	0.0010		mg/L	1	2/21/2019 7:46:52 PM	43267
Thallium	ND	0.000052	0.00050		mg/L	1	2/21/2019 7:46:52 PM	43267
Uranium	0.049	0.00042	0.0025	*	mg/L	5	2/22/2019 10:25:42 AM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000042	0.000038	0.00020	J	mg/L	1	2/27/2019 3:49:03 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Benzoic acid	11	6.3	20	J	µg/L	1	3/4/2019 1:58:06 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/4/2019 1:58:06 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 1:58:06 PM	43262

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:38:00 PM
Lab ID: 1902673-007
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 1:58:06 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 1:58:06 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 1:58:06 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 1:58:06 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 1:58:06 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 1:58:06 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 1:58:06 PM	43262
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 1:58:06 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 1:58:06 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 1:58:06 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 1:58:06 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 1:58:06 PM	43262

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:38:00 PM
Lab ID: 1902673-007
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 1:58:06 PM	43262
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 1:58:06 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 1:58:06 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 1:58:06 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 1:58:06 PM	43262
Surr: 2-Fluorophenol	46.9	0	15-101		%Rec	1	3/4/2019 1:58:06 PM	43262
Surr: Phenol-d5	35.2	0	15-84.6		%Rec	1	3/4/2019 1:58:06 PM	43262
Surr: 2,4,6-Tribromophenol	76.8	0	27.8-112		%Rec	1	3/4/2019 1:58:06 PM	43262
Surr: Nitrobenzene-d5	59.0	0	33-113		%Rec	1	3/4/2019 1:58:06 PM	43262
Surr: 2-Fluorobiphenyl	48.5	0	26.6-107		%Rec	1	3/4/2019 1:58:06 PM	43262
Surr: 4-Terphenyl-d14	93.0	0	18.7-148		%Rec	1	3/4/2019 1:58:06 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.35	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Toluene	ND	0.34	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Ethylbenzene	ND	0.45	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Methyl tert-butyl ether (MTBE)	840	9.1	20		µg/L	20	2/19/2019 4:22:57 PM	A57800
1,2,4-Trimethylbenzene	ND	0.51	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,2-Dichloroethane (EDC)	15	0.38	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Naphthalene	ND	0.58	4.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1-Methylnaphthalene	ND	0.67	8.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
2-Methylnaphthalene	ND	0.69	8.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Acetone	5.0	1.5	20	J	µg/L	2	2/19/2019 4:52:15 PM	A57800
Bromobenzene	ND	0.64	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Bromodichloromethane	ND	0.57	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Bromoform	ND	0.65	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Bromomethane	ND	0.55	6.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
2-Butanone	ND	2.8	20		µg/L	2	2/19/2019 4:52:15 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:38:00 PM
Lab ID: 1902673-007
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Carbon disulfide	ND	0.77	20		µg/L	2	2/19/2019 4:52:15 PM	A57800
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Chlorobenzene	ND	0.58	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Chloroethane	ND	0.33	4.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Chloroform	ND	0.47	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Chloromethane	ND	0.64	6.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
2-Chlorotoluene	ND	0.50	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
4-Chlorotoluene	ND	0.56	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
cis-1,2-DCE	2.1	0.75	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Dibromochloromethane	ND	0.47	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Dibromomethane	ND	0.64	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,4-Dichlorobenzene	ND	0.58	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,1-Dichloroethane	13	0.35	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,1-Dichloroethene	27	0.24	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,2-Dichloropropane	ND	0.33	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Hexachlorobutadiene	ND	0.78	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
2-Hexanone	ND	1.8	20		µg/L	2	2/19/2019 4:52:15 PM	A57800
Isopropylbenzene	ND	0.44	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	2/19/2019 4:52:15 PM	A57800
Methylene Chloride	ND	0.41	6.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
n-Butylbenzene	ND	0.50	6.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
n-Propylbenzene	ND	0.49	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
sec-Butylbenzene	0.63	0.40	2.0	J	µg/L	2	2/19/2019 4:52:15 PM	A57800
Styrene	ND	0.50	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 3:38:00 PM
Lab ID: 1902673-007
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,1,1-Trichloroethane	ND	0.33	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,1,2-Trichloroethane	0.86	0.47	2.0	J	µg/L	2	2/19/2019 4:52:15 PM	A57800
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Trichlorofluoromethane	ND	0.29	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Vinyl chloride	ND	0.24	2.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Xylenes, Total	ND	1.3	3.0		µg/L	2	2/19/2019 4:52:15 PM	A57800
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	2	2/19/2019 4:52:15 PM	A57800
Surr: 4-Bromofluorobenzene	94.0	0	70-130		%Rec	2	2/19/2019 4:52:15 PM	A57800
Surr: Dibromofluoromethane	106	0	70-130		%Rec	2	2/19/2019 4:52:15 PM	A57800
Surr: Toluene-d8	97.4	0	70-130		%Rec	2	2/19/2019 4:52:15 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:00:00 PM
Lab ID: 1902673-008
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	2/19/2019 10:57:15 PM	43226
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/19/2019 7:08:14 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 7:08:14 PM	43211
Surr: DNOP	126	0	70-130		%Rec	1	2/19/2019 7:08:14 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	2/18/2019 5:05:45 PM	G57762
Surr: BFB	98.4	0	72.8-125		%Rec	1	2/18/2019 5:05:45 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.33	0.25	0.50	J	mg/L	5	2/15/2019 12:19:19 AM	A57738
Chloride	840	50	50		mg/L	100	2/27/2019 11:14:01 PM	R58008
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/15/2019 12:19:19 AM	A57738
Bromide	2.2	0.068	0.50		mg/L	5	2/15/2019 12:19:19 AM	A57738
Nitrogen, Nitrate (As N)	5.6	0.14	0.50		mg/L	5	2/15/2019 12:19:19 AM	A57738
Phosphorus, Orthophosphate (As P)	0.29	0.13	2.5	J	mg/L	5	2/15/2019 12:19:19 AM	A57738
Sulfate	61	0.32	2.5		mg/L	5	2/15/2019 12:19:19 AM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.060	0.00065	0.0020		mg/L	1	2/18/2019 4:39:37 PM	A57777
Beryllium	ND	0.00028	0.0020		mg/L	1	2/18/2019 4:39:37 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:39:37 PM	A57777
Calcium	14	0.062	1.0		mg/L	1	2/18/2019 4:39:37 PM	A57777
Chromium	ND	0.0015	0.0060		mg/L	1	2/18/2019 4:39:37 PM	A57777
Copper	0.0028	0.0013	0.0060	J	mg/L	1	2/18/2019 4:39:37 PM	A57777
Iron	ND	0.0087	0.020		mg/L	1	2/18/2019 4:39:37 PM	A57777
Magnesium	1.6	0.050	1.0		mg/L	1	2/18/2019 4:39:37 PM	A57777
Manganese	0.0085	0.00029	0.0020		mg/L	1	2/18/2019 4:39:37 PM	A57777
Potassium	1.4	0.16	1.0		mg/L	1	2/18/2019 4:39:37 PM	A57777
Silver	ND	0.00094	0.0050		mg/L	1	2/18/2019 4:39:37 PM	A57777
Sodium	650	8.3	20		mg/L	20	2/18/2019 7:47:36 PM	A57777
Zinc	0.022	0.0023	0.010		mg/L	1	2/18/2019 4:39:37 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.068	0.00065	0.0020		mg/L	1	2/28/2019 4:58:04 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 4:58:04 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 4:58:04 PM	43338
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 4:58:04 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 4:58:04 PM	43338
Iron	0.16	0.0087	0.020		mg/L	1	2/28/2019 4:58:04 PM	43338

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Collection Date: 2/13/2019 4:00:00 PM
Lab ID: 1902673-008
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Manganese	0.014	0.00029	0.0020		mg/L	1	2/28/2019 4:58:04 PM	43338
Silver	ND	0.0014	0.0050		mg/L	1	2/28/2019 4:58:04 PM	43338
Zinc	ND	0.0058	0.010		mg/L	1	2/28/2019 4:58:04 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00025	0.00020	0.0010	J	mg/L	1	2/22/2019 1:38:55 PM	A57901
Arsenic	0.0019	0.000068	0.0010		mg/L	1	2/20/2019 8:07:16 PM	C57846
Lead	ND	0.000047	0.00050		mg/L	1	2/20/2019 8:07:16 PM	C57846
Selenium	0.033	0.00020	0.0010		mg/L	1	2/20/2019 8:07:16 PM	C57846
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 8:07:16 PM	C57846
Uranium	0.012	0.000030	0.00050		mg/L	1	2/20/2019 8:07:16 PM	C57846
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/21/2019 7:48:49 PM	43267
Arsenic	0.0021	0.00031	0.0010		mg/L	1	2/21/2019 7:48:49 PM	43267
Lead	0.00020	0.000047	0.00050	J	mg/L	1	2/21/2019 7:48:49 PM	43267
Selenium	0.036	0.00048	0.0010		mg/L	1	2/21/2019 7:48:49 PM	43267
Thallium	ND	0.000052	0.00050		mg/L	1	2/21/2019 7:48:49 PM	43267
Uranium	0.011	0.000085	0.00050		mg/L	1	2/21/2019 7:48:49 PM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000080	0.000038	0.00020	J	mg/L	1	2/27/2019 3:51:18 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Benzoic acid	8.3	6.3	20	J	µg/L	1	3/4/2019 2:27:43 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/4/2019 2:27:43 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 2:27:43 PM	43262

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:00:00 PM
Lab ID: 1902673-008
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 2:27:43 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 2:27:43 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 2:27:43 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 2:27:43 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 2:27:43 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 2:27:43 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 2:27:43 PM	43262
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 2:27:43 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 2:27:43 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 2:27:43 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 2:27:43 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 2:27:43 PM	43262

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:00:00 PM
Lab ID: 1902673-008
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 2:27:43 PM	43262
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 2:27:43 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 2:27:43 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 2:27:43 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 2:27:43 PM	43262
Surr: 2-Fluorophenol	30.6	0	15-101		%Rec	1	3/4/2019 2:27:43 PM	43262
Surr: Phenol-d5	21.6	0	15-84.6		%Rec	1	3/4/2019 2:27:43 PM	43262
Surr: 2,4,6-Tribromophenol	47.3	0	27.8-112		%Rec	1	3/4/2019 2:27:43 PM	43262
Surr: Nitrobenzene-d5	39.5	0	33-113		%Rec	1	3/4/2019 2:27:43 PM	43262
Surr: 2-Fluorobiphenyl	35.8	0	26.6-107		%Rec	1	3/4/2019 2:27:43 PM	43262
Surr: 4-Terphenyl-d14	33.5	0	18.7-148		%Rec	1	3/4/2019 2:27:43 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Methyl tert-butyl ether (MTBE)	0.99	0.46	1.0	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2,4-Trimethylbenzene	0.53	0.25	1.0	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2-Dichloroethane (EDC)	3.7	0.19	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Naphthalene	0.92	0.29	2.0	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
1-Methylnaphthalene	0.80	0.34	4.0	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
2-Methylnaphthalene	0.81	0.35	4.0	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
Acetone	1.2	0.76	10	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 1:26:20 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:00:00 PM
Lab ID: 1902673-008
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 1:26:20 PM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Chloroform	ND	0.24	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,1-Dichloroethane	4.3	0.18	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,1-Dichloroethene	7.3	0.12	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 1:26:20 PM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 1:26:20 PM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:00:00 PM
Lab ID: 1902673-008
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,1,2-Trichloroethane	0.57	0.23	1.0	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 1:26:20 PM	A57800
Xylenes, Total	1.3	0.64	1.5	J	µg/L	1	2/19/2019 1:26:20 PM	A57800
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	2/19/2019 1:26:20 PM	A57800
Surr: 4-Bromofluorobenzene	95.0	0	70-130		%Rec	1	2/19/2019 1:26:20 PM	A57800
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	2/19/2019 1:26:20 PM	A57800
Surr: Toluene-d8	101	0	70-130		%Rec	1	2/19/2019 1:26:20 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:20:00 PM
Lab ID: 1902673-009
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.44	0.35	1.0	J	mg/L	1	2/19/2019 7:32:18 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 7:32:18 PM	43211
Surr: DNOP	118	0	70-130		%Rec	1	2/19/2019 7:32:18 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.43	0.021	0.050		mg/L	1	2/18/2019 5:28:33 PM	G57762
Surr: BFB	6320	0	72.8-125	S	%Rec	1	2/18/2019 5:28:33 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/15/2019 12:44:09 AM	A57738
Chloride	2000	100	100		mg/L	200	2/27/2019 11:26:25 PM	R58008
Nitrogen, Nitrite (As N)	ND	1.4	2.0		mg/L	20	2/15/2019 12:56:34 AM	A57738
Bromide	2.9	0.27	2.0		mg/L	20	2/15/2019 12:56:34 AM	A57738
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/15/2019 12:44:09 AM	A57738
Phosphorus, Orthophosphate (As P)	ND	0.52	10		mg/L	20	2/15/2019 12:56:34 AM	A57738
Sulfate	2600	13	100		mg/L	200	2/27/2019 11:26:25 PM	R58008
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.011	0.00065	0.0020		mg/L	1	2/18/2019 4:43:44 PM	A57777
Beryllium	ND	0.00028	0.0020		mg/L	1	2/18/2019 4:43:44 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:43:44 PM	A57777
Calcium	220	0.31	5.0		mg/L	5	2/18/2019 4:45:53 PM	A57777
Chromium	ND	0.0015	0.0060		mg/L	1	2/18/2019 4:43:44 PM	A57777
Copper	0.0046	0.0013	0.0060	J	mg/L	1	2/18/2019 4:43:44 PM	A57777
Iron	0.031	0.0087	0.020		mg/L	1	2/18/2019 4:43:44 PM	A57777
Magnesium	61	0.050	1.0		mg/L	1	2/18/2019 4:43:44 PM	A57777
Manganese	0.054	0.00029	0.0020	*	mg/L	1	2/18/2019 4:43:44 PM	A57777
Potassium	0.65	0.16	1.0	J	mg/L	1	2/18/2019 4:43:44 PM	A57777
Silver	0.0043	0.00094	0.0050	J	mg/L	1	2/18/2019 4:43:44 PM	A57777
Sodium	2400	21	50		mg/L	50	2/18/2019 7:51:56 PM	A57777
Zinc	0.020	0.0023	0.010		mg/L	1	2/18/2019 4:43:44 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.066	0.00065	0.0020		mg/L	1	2/28/2019 5:06:45 PM	43338
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 5:06:45 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 5:06:45 PM	43338
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 5:06:45 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 5:06:45 PM	43338
Iron	1.8	0.044	0.10	*	mg/L	5	2/28/2019 5:08:41 PM	43338
Manganese	0.13	0.00029	0.0020	*	mg/L	1	2/28/2019 5:06:45 PM	43338
Silver	0.0052	0.0014	0.0050		mg/L	1	2/28/2019 5:06:45 PM	43338

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:20:00 PM
Lab ID: 1902673-009
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.015	0.0058	0.010		mg/L	1	2/28/2019 5:06:45 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 1:41:19 PM	A57901
Arsenic	0.0043	0.000068	0.0010		mg/L	1	2/20/2019 8:09:41 PM	C57846
Lead	ND	0.000047	0.00050		mg/L	1	2/20/2019 8:09:41 PM	C57846
Selenium	0.0010	0.00020	0.0010		mg/L	1	2/20/2019 8:09:41 PM	C57846
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 8:09:41 PM	C57846
Uranium	0.15	0.00030	0.0050	*	mg/L	10	2/22/2019 1:58:20 PM	A57901
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 10:27:38 AM	43267
Arsenic	0.0055	0.0016	0.0050		mg/L	5	2/22/2019 10:27:38 AM	43267
Lead	0.0017	0.00024	0.0025	J	mg/L	5	2/22/2019 10:27:38 AM	43267
Selenium	ND	0.0024	0.0050		mg/L	5	2/22/2019 10:27:38 AM	43267
Thallium	ND	0.00026	0.0025		mg/L	5	2/22/2019 10:27:38 AM	43267
Uranium	0.13	0.00085	0.0050	*	mg/L	10	2/22/2019 10:49:05 AM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000044	0.000038	0.00020	J	mg/L	1	2/27/2019 3:53:34 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Benzoic acid	ND	6.3	20		µg/L	1	3/4/2019 2:57:17 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/4/2019 2:57:17 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262

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Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 2:57:17 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 2:57:17 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 2:57:17 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 2:57:17 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 2:57:17 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 2:57:17 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 2:57:17 PM	43262
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 2:57:17 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 2:57:17 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 2:57:17 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 2:57:17 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 2:57:17 PM	43262

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Lab ID: 1902673-009
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 2:57:17 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 2:57:17 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 2:57:17 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 2:57:17 PM	43262
Surr: 2-Fluorophenol	30.9	0	15-101		%Rec	1	3/4/2019 2:57:17 PM	43262
Surr: Phenol-d5	33.6	0	15-84.6		%Rec	1	3/4/2019 2:57:17 PM	43262
Surr: 2,4,6-Tribromophenol	45.4	0	27.8-112		%Rec	1	3/4/2019 2:57:17 PM	43262
Surr: Nitrobenzene-d5	60.0	0	33-113		%Rec	1	3/4/2019 2:57:17 PM	43262
Surr: 2-Fluorobiphenyl	48.7	0	26.6-107		%Rec	1	3/4/2019 2:57:17 PM	43262
Surr: 4-Terphenyl-d14	72.7	0	18.7-148		%Rec	1	3/4/2019 2:57:17 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Methyl tert-butyl ether (MTBE)	10	0.46	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Naphthalene	ND	0.29	2.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Acetone	2.8	0.76	10	J	µg/L	1	2/19/2019 1:55:43 PM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 1:55:43 PM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 1:55:43 PM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Chloroform	ND	0.24	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 1:55:43 PM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 1:55:43 PM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 1:55:43 PM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 1:55:43 PM	A57800
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	2/19/2019 1:55:43 PM	A57800
Surr: 4-Bromofluorobenzene	96.6	0	70-130		%Rec	1	2/19/2019 1:55:43 PM	A57800
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	2/19/2019 1:55:43 PM	A57800
Surr: Toluene-d8	116	0	70-130		%Rec	1	2/19/2019 1:55:43 PM	A57800

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
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Collection Date: 2/13/2019 4:40:00 PM
Lab ID: 1902673-010
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/19/2019 7:56:16 PM	43211
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/19/2019 7:56:16 PM	43211
Surr: DNOP	126	0	70-130		%Rec	1	2/19/2019 7:56:16 PM	43211
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	2/18/2019 5:51:17 PM	G57762
Surr: BFB	111	0	72.8-125		%Rec	1	2/18/2019 5:51:17 PM	G57762
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.41	0.25	0.50	J	mg/L	5	2/15/2019 1:08:58 AM	A57738
Chloride	1700	100	100		mg/L	200	2/27/2019 11:38:50 PM	R58008
Nitrogen, Nitrite (As N)	ND	1.4	2.0		mg/L	20	2/15/2019 1:46:11 AM	A57738
Bromide	4.4	0.068	0.50		mg/L	5	2/15/2019 1:08:58 AM	A57738
Nitrogen, Nitrate (As N)	16	0.14	0.50	*	mg/L	5	2/15/2019 1:08:58 AM	A57738
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/15/2019 1:08:58 AM	A57738
Sulfate	740	1.3	10		mg/L	20	2/15/2019 1:46:11 AM	A57738
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Barium	0.026	0.00065	0.0020		mg/L	1	2/18/2019 4:54:26 PM	A57777
Beryllium	ND	0.00028	0.0020		mg/L	1	2/18/2019 4:54:26 PM	A57777
Cadmium	ND	0.00055	0.0020		mg/L	1	2/18/2019 4:54:26 PM	A57777
Calcium	110	0.31	5.0		mg/L	5	2/18/2019 4:56:40 PM	A57777
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	2/18/2019 4:54:26 PM	A57777
Copper	0.0037	0.0013	0.0060	J	mg/L	1	2/18/2019 4:54:26 PM	A57777
Iron	0.0097	0.0087	0.020	J	mg/L	1	2/18/2019 4:54:26 PM	A57777
Magnesium	16	0.050	1.0		mg/L	1	2/18/2019 4:54:26 PM	A57777
Manganese	0.0031	0.00029	0.0020		mg/L	1	2/18/2019 4:54:26 PM	A57777
Potassium	3.0	0.16	1.0		mg/L	1	2/18/2019 4:54:26 PM	A57777
Silver	0.0028	0.00094	0.0050	J	mg/L	1	2/18/2019 4:54:26 PM	A57777
Sodium	1400	8.3	20		mg/L	20	2/18/2019 7:54:09 PM	A57777
Zinc	0.027	0.0023	0.010		mg/L	1	2/18/2019 4:54:26 PM	A57777
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.20	0.00065	0.0020		mg/L	1	2/28/2019 5:10:46 PM	43338
Beryllium	0.00039	0.00028	0.0020	J	mg/L	1	2/28/2019 5:10:46 PM	43338
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 5:10:46 PM	43338
Chromium	0.011	0.0015	0.0060		mg/L	1	2/28/2019 5:10:46 PM	43338
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 5:10:46 PM	43338
Iron	4.8	0.087	0.20	*	mg/L	10	2/28/2019 5:12:48 PM	43338
Manganese	0.21	0.00029	0.0020	*	mg/L	1	2/28/2019 5:10:46 PM	43338
Silver	0.0025	0.0014	0.0050	J	mg/L	1	2/28/2019 5:10:46 PM	43338

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EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.015	0.0058	0.010		mg/L	1	2/28/2019 5:10:46 PM	43338
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 1:51:03 PM	A57901
Arsenic	0.0015	0.000068	0.0010		mg/L	1	2/20/2019 8:12:06 PM	C57846
Lead	ND	0.000047	0.00050		mg/L	1	2/20/2019 8:12:06 PM	C57846
Selenium	0.016	0.00020	0.0010		mg/L	1	2/20/2019 8:12:06 PM	C57846
Thallium	ND	0.000032	0.00050		mg/L	1	2/20/2019 8:12:06 PM	C57846
Uranium	0.060	0.00015	0.0025	*	mg/L	5	2/22/2019 1:51:03 PM	A57901
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/22/2019 10:29:35 AM	43267
Arsenic	0.0029	0.00031	0.0010		mg/L	1	2/21/2019 7:52:42 PM	43267
Lead	0.0037	0.000047	0.00050		mg/L	1	2/21/2019 7:52:42 PM	43267
Selenium	0.016	0.00048	0.0010		mg/L	1	2/21/2019 7:52:42 PM	43267
Thallium	0.000077	0.000052	0.00050	J	mg/L	1	2/21/2019 7:52:42 PM	43267
Uranium	0.051	0.00042	0.0025	*	mg/L	5	2/22/2019 10:29:35 AM	43267
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000061	0.000038	0.00020	J	mg/L	1	2/27/2019 4:00:27 PM	43375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Acenaphthylene	ND	6.2	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Aniline	ND	6.2	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Anthracene	ND	5.7	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Azobenzene	ND	6.7	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Benzoic acid	8.4	6.3	20	J	µg/L	1	3/4/2019 3:26:49 PM	43262
Benzyl alcohol	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/4/2019 3:26:49 PM	43262
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Carbazole	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/4/2019 3:26:49 PM	43262
4-Chloroaniline	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2-Chlorophenol	ND	5.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Chrysene	ND	6.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Dibenzofuran	ND	6.9	10		µg/L	1	3/4/2019 3:26:49 PM	43262
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Diethyl phthalate	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/4/2019 3:26:49 PM	43262
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/4/2019 3:26:49 PM	43262
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/4/2019 3:26:49 PM	43262
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/4/2019 3:26:49 PM	43262
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Fluoranthene	ND	5.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Fluorene	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Hexachloroethane	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Isophorone	ND	6.2	10		µg/L	1	3/4/2019 3:26:49 PM	43262
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2-Methylphenol	ND	6.3	10		µg/L	1	3/4/2019 3:26:49 PM	43262
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/4/2019 3:26:49 PM	43262
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/4/2019 3:26:49 PM	43262
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/4/2019 3:26:49 PM	43262
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Naphthalene	ND	5.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2-Nitroaniline	ND	5.9	10		µg/L	1	3/4/2019 3:26:49 PM	43262

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
4-Nitroaniline	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Nitrobenzene	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2-Nitrophenol	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
4-Nitrophenol	ND	5.6	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Pentachlorophenol	ND	5.3	20		µg/L	1	3/4/2019 3:26:49 PM	43262
Phenanthrene	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Phenol	ND	6.0	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Pyrene	ND	6.5	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Pyridine	ND	5.4	10		µg/L	1	3/4/2019 3:26:49 PM	43262
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/4/2019 3:26:49 PM	43262
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/4/2019 3:26:49 PM	43262
Surr: 2-Fluorophenol	51.6	0	15-101		%Rec	1	3/4/2019 3:26:49 PM	43262
Surr: Phenol-d5	37.8	0	15-84.6		%Rec	1	3/4/2019 3:26:49 PM	43262
Surr: 2,4,6-Tribromophenol	81.5	0	27.8-112		%Rec	1	3/4/2019 3:26:49 PM	43262
Surr: Nitrobenzene-d5	71.8	0	33-113		%Rec	1	3/4/2019 3:26:49 PM	43262
Surr: 2-Fluorobiphenyl	60.2	0	26.6-107		%Rec	1	3/4/2019 3:26:49 PM	43262
Surr: 4-Terphenyl-d14	88.2	0	18.7-148		%Rec	1	3/4/2019 3:26:49 PM	43262
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Methyl tert-butyl ether (MTBE)	0.46	0.46	1.0	J	µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Naphthalene	ND	0.29	2.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Acetone	1.7	0.76	10	J	µg/L	1	2/19/2019 2:25:24 PM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 2:25:24 PM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 2:25:24 PM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800

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EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Chloroform	ND	0.24	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 2:25:24 PM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 2:25:24 PM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 1st QTR GW Sampling
Collection Date: 2/13/2019 4:40:00 PM
Lab ID: 1902673-010
Matrix: AQUEOUS
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 2:25:24 PM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 2:25:24 PM	A57800
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	1	2/19/2019 2:25:24 PM	A57800
Surr: 4-Bromofluorobenzene	98.9	0	70-130		%Rec	1	2/19/2019 2:25:24 PM	A57800
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	2/19/2019 2:25:24 PM	A57800
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	2/19/2019 2:25:24 PM	A57800

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Sampling
Collection Date:
Lab ID: 1902673-011
Matrix: TRIP BLANK
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Toluene	ND	0.17	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Naphthalene	ND	0.29	2.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Acetone	1.6	0.76	10	J	µg/L	1	2/19/2019 10:59:05 AM	A57800
Bromobenzene	ND	0.32	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Bromoform	ND	0.32	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Bromomethane	ND	0.27	3.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
2-Butanone	ND	1.4	10		µg/L	1	2/19/2019 10:59:05 AM	A57800
Carbon disulfide	ND	0.39	10		µg/L	1	2/19/2019 10:59:05 AM	A57800
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Chloroethane	ND	0.16	2.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Chloroform	ND	0.24	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Chloromethane	ND	0.32	3.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Dibromomethane	ND	0.32	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/19/2019 10:59:05 AM	A57800

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Sampling
Collection Date:
Lab ID: 1902673-011
Matrix: TRIP BLANK
Received Date: 2/14/2019 2:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
2-Hexanone	ND	0.91	10		µg/L	1	2/19/2019 10:59:05 AM	A57800
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/19/2019 10:59:05 AM	A57800
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Styrene	ND	0.25	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/19/2019 10:59:05 AM	A57800
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/19/2019 10:59:05 AM	A57800
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	2/19/2019 10:59:05 AM	A57800
Surr: 4-Bromofluorobenzene	97.8	0	70-130		%Rec	1	2/19/2019 10:59:05 AM	A57800
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	2/19/2019 10:59:05 AM	A57800
Surr: Toluene-d8	99.6	0	70-130		%Rec	1	2/19/2019 10:59:05 AM	A57800

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43338** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **43338** RunNo: **57957**

Prep Date: **2/25/2019** Analysis Date: **2/26/2019** SeqNo: **1940651** Units: **mg/L**

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

Sample ID: **LLLCS-43338** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **43338** RunNo: **57957**

Prep Date: **2/25/2019** Analysis Date: **2/26/2019** SeqNo: **1940653** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	96.4	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	100	50	150			J
Cadmium	0.0014	0.0020	0.002000	0	72.1	50	150			J
Chromium	0.0063	0.0060	0.006000	0	104	50	150			
Copper	0.0059	0.0060	0.006000	0	98.1	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Silver	0.0046	0.0050	0.005000	0	92.6	50	150			J
Zinc	0.0057	0.010	0.005000	0	114	50	150			J

Sample ID: **LCS-43338** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **43338** RunNo: **57957**

Prep Date: **2/25/2019** Analysis Date: **2/26/2019** SeqNo: **1940655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.4	85	115			
Chromium	0.47	0.0060	0.5000	0	94.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Iron	0.49	0.020	0.5000	0	97.7	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Silver	0.10	0.0050	0.1000	0	99.7	85	115			
Zinc	0.47	0.010	0.5000	0	94.3	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **1902673-004EMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-43** Batch ID: **43338** RunNo: **58024**

Prep Date: **2/25/2019** Analysis Date: **2/28/2019** SeqNo: **1944441** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.59	0.0020	0.5000	0.1203	94.8	70	130			
Beryllium	0.50	0.0020	0.5000	0	100	70	130			
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Chromium	0.46	0.0060	0.5000	0	92.8	70	130			
Copper	0.58	0.0060	0.5000	0	116	70	130			
Silver	0.13	0.0050	0.1000	0.01638	117	70	130			
Zinc	0.44	0.010	0.5000	0.007708	86.4	70	130			

Sample ID: **1902673-004EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-43** Batch ID: **43338** RunNo: **58024**

Prep Date: **2/25/2019** Analysis Date: **2/28/2019** SeqNo: **1944446** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.61	0.0020	0.5000	0.1203	97.4	70	130	2.16	20	
Beryllium	0.50	0.0020	0.5000	0	99.8	70	130	0.239	20	
Cadmium	0.52	0.0020	0.5000	0	103	70	130	1.99	20	
Chromium	0.47	0.0060	0.5000	0	94.0	70	130	1.26	20	
Copper	0.58	0.0060	0.5000	0	117	70	130	0.639	20	
Silver	0.14	0.0050	0.1000	0.01638	120	70	130	2.23	20	
Zinc	0.45	0.010	0.5000	0.007708	88.0	70	130	1.84	20	

Sample ID: **1902673-004EMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-43** Batch ID: **43338** RunNo: **58024**

Prep Date: **2/25/2019** Analysis Date: **2/28/2019** SeqNo: **1944448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	1.5	0.010	0.5000	1.099	84.7	70	130			

Sample ID: **1902673-004EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-43** Batch ID: **43338** RunNo: **58024**

Prep Date: **2/25/2019** Analysis Date: **2/28/2019** SeqNo: **1944449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	1.6	0.010	0.5000	1.099	96.5	70	130	3.81	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A57777**	RunNo: **57777**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1934092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A57777**	RunNo: **57777**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1934093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.6	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	97.4	50	150			J
Cadmium	0.0016	0.0020	0.002000	0	81.8	50	150			J
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.7	50	150			J
Copper	0.0057	0.0060	0.006000	0	95.5	50	150			J
Iron	0.023	0.020	0.02000	0	115	50	150			
Magnesium	0.52	1.0	0.5000	0	105	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Potassium	0.47	1.0	0.5000	0	93.5	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.2	50	150			J
Sodium	0.45	1.0	0.5000	0	90.3	50	150			J
Zinc	0.0069	0.010	0.005000	0	139	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57777**	RunNo: **57777**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1934094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	92.6	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.6	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57777**	RunNo: **57777**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1934094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.47	0.0020	0.5000	0	94.9	85	115			
Calcium	47	1.0	50.00	0	94.2	85	115			
Chromium	0.46	0.0060	0.5000	0	92.2	85	115			
Copper	0.47	0.0060	0.5000	0	94.8	85	115			
Iron	0.47	0.020	0.5000	0	93.7	85	115			
Magnesium	48	1.0	50.00	0	96.0	85	115			
Manganese	0.46	0.0020	0.5000	0	93.0	85	115			
Potassium	47	1.0	50.00	0	93.3	85	115			
Silver	0.095	0.0050	0.1000	0	94.8	85	115			
Sodium	48	1.0	50.00	0	95.1	85	115			
Zinc	0.46	0.010	0.5000	0	92.0	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43267**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **43267**	RunNo: **57887**
Prep Date: **2/20/2019**	Analysis Date: **2/21/2019**	SeqNo: **1938404** Units: **mg/L**

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

Sample ID: **MSLLLCS-43267**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **43267**	RunNo: **57887**
Prep Date: **2/20/2019**	Analysis Date: **2/21/2019**	SeqNo: **1938405** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	103	50	150			
Arsenic	0.00095	0.0010	0.001000	0	95.4	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.8	50	150			J
Selenium	0.0010	0.0010	0.001000	0	102	50	150			
Thallium	0.00045	0.00050	0.0005000	0	91.0	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.3	50	150			J

Sample ID: **MSLCS-43267**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **43267**	RunNo: **57887**
Prep Date: **2/20/2019**	Analysis Date: **2/21/2019**	SeqNo: **1938406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.6	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	95.4	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Thallium	0.012	0.00050	0.01250	0	95.1	85	115			
Uranium	0.012	0.00050	0.01250	0	93.7	85	115			

Sample ID: **1902673-003ELLMS**	SampType: **MS**	TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-44**	Batch ID: **43267**	RunNo: **57887**
Prep Date: **2/20/2019**	Analysis Date: **2/21/2019**	SeqNo: **1938409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0.0003858	107	70	130			
Arsenic	0.031	0.0010	0.02500	0.005002	105	70	130			
Lead	0.020	0.00050	0.01250	0.007419	99.8	70	130			
Selenium	0.034	0.0010	0.02500	0.009014	98.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **1902673-003ELLMS** SampType: **MS** TestCode: **EPA 200.8: Metals**

Client ID: **MKTF-44** Batch ID: **43267** RunNo: **57887**

Prep Date: **2/20/2019** Analysis Date: **2/21/2019** SeqNo: **1938409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.012	0.00050	0.01250	0.0001559	96.4	70	130			

Sample ID: **1902673-003ELLMS** SampType: **MSD** TestCode: **EPA 200.8: Metals**

Client ID: **MKTF-44** Batch ID: **43267** RunNo: **57887**

Prep Date: **2/20/2019** Analysis Date: **2/21/2019** SeqNo: **1938412** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0.0003858	109	70	130	1.35	20	
Arsenic	0.032	0.0010	0.02500	0.005002	106	70	130	1.18	20	
Lead	0.020	0.00050	0.01250	0.007419	100	70	130	0.169	20	
Selenium	0.034	0.0010	0.02500	0.009014	100	70	130	1.13	20	
Thallium	0.012	0.00050	0.01250	0.0001559	97.6	70	130	1.16	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936893** Units: **mg/L**

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

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00093	0.0010	0.001000	0	92.5	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.0	50	150			J
Selenium	0.0010	0.0010	0.001000	0	102	50	150			
Thallium	0.00044	0.00050	0.0005000	0	88.2	50	150			J

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936897** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.7	85	115			
Lead	0.011	0.00050	0.01250	0	89.6	85	115			
Selenium	0.023	0.0010	0.02500	0	92.7	85	115			
Thallium	0.011	0.00050	0.01250	0	89.5	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936924** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	0.00014	0.00050								J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936925** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00091	0.0010	0.001000	0	91.3	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.6	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.3	50	150			J
Thallium	0.00044	0.00050	0.0005000	0	88.6	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936926** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.4	85	115			
Lead	0.011	0.00050	0.01250	0	89.1	85	115			
Selenium	0.023	0.0010	0.02500	0	91.1	85	115			
Thallium	0.011	0.00050	0.01250	0	88.8	85	115			
Uranium	0.012	0.00050	0.01250	0	93.1	85	115			

Sample ID: **1902673-005FMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **DUPLIACATE**	Batch ID: **C57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936929** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0.0001409	95.8	70	130			
Thallium	0.012	0.00050	0.01250	0	95.5	70	130			

Sample ID: **1902673-005FMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **DUPLIACATE**	Batch ID: **C57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936930** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0.0001409	95.6	70	130	0.276	20	
Thallium	0.012	0.00050	0.01250	0	96.3	70	130	0.874	20	

Sample ID: **1902673-006FMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-42**	Batch ID: **C57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936934** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.001371	94.7	70	130			
Lead	0.012	0.00050	0.01250	0	94.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **1902673-006FMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-42**	Batch ID: **C57846**	RunNo: **57846**
Prep Date:	Analysis Date: **2/20/2019**	SeqNo: **1936934** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0.001186	94.3	70	130			
Thallium	0.012	0.00050	0.01250	0	93.4	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A57901**	RunNo: **57901**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938570** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A57901**	RunNo: **57901**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938571** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	103	50	150			
Arsenic	0.00098	0.0010	0.001000	0	97.8	50	150			J
Selenium	0.00099	0.0010	0.001000	0	98.9	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57901**	RunNo: **57901**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938572** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Selenium	0.025	0.0010	0.02500	0	99.8	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43375**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **43375**	RunNo: **57993**
Prep Date: **2/27/2019**	Analysis Date: **2/27/2019**	SeqNo: **1941758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000039	0.00020								J

Sample ID: **LCS-43375**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **43375**	RunNo: **57993**
Prep Date: **2/27/2019**	Analysis Date: **2/27/2019**	SeqNo: **1941759** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.4	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A57738**	RunNo: **57738**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1932497** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A57738**	RunNo: **57738**
Prep Date:	Analysis Date: **2/14/2019**	SeqNo: **1932498** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.5	90	110			
Bromide	2.4	0.10	2.500	0	96.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.4	90	110			
Sulfate	9.8	0.50	10.00	0	98.2	90	110			

Sample ID: **1902673-010DMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **OW-60**	Batch ID: **A57738**	RunNo: **57738**
Prep Date:	Analysis Date: **2/15/2019**	SeqNo: **1932522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.1	0.50	2.500	0.4100	107	66.7	127			
Bromide	17	0.50	12.50	4.385	97.4	80.2	111			
Nitrogen, Nitrate (As N)	30	0.50	12.50	16.47	110	79.1	116			
Phosphorus, Orthophosphate (As P	22	2.5	25.00	0	86.2	80.7	113			

Sample ID: **1902673-010DMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **OW-60**	Batch ID: **A57738**	RunNo: **57738**
Prep Date:	Analysis Date: **2/15/2019**	SeqNo: **1932523** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.1	0.50	2.500	0.4100	108	66.7	127	0.808	20	
Bromide	17	0.50	12.50	4.385	98.1	80.2	111	0.542	20	
Nitrogen, Nitrate (As N)	31	0.50	12.50	16.47	112	79.1	116	0.757	20	
Phosphorus, Orthophosphate (As P	21	2.5	25.00	0	86.0	80.7	113	0.232	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R58008**	RunNo: **58008**
Prep Date:	Analysis Date: **2/27/2019**	SeqNo: **1942392** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R58008**	RunNo: **58008**
Prep Date:	Analysis Date: **2/27/2019**	SeqNo: **1942393** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43226**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **43226**	RunNo: **57830**
Prep Date: **2/19/2019**	Analysis Date: **2/19/2019**	SeqNo: **1936140** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-43226**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **43226**	RunNo: **57830**
Prep Date: **2/19/2019**	Analysis Date: **2/19/2019**	SeqNo: **1936141** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.087	0.010	0.1000	0	86.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-43211**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **43211**	RunNo: **57792**
Prep Date: **2/18/2019**	Analysis Date: **2/19/2019**	SeqNo: **1935257** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.8	1.0	5.000	0	95.4	71.8	135			
Surr: DNOP	0.54		0.5000		107	70	130			

Sample ID: **MB-43211**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **43211**	RunNo: **57792**
Prep Date: **2/18/2019**	Analysis Date: **2/19/2019**	SeqNo: **1935258** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		120	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G57762**	RunNo: **57762**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1933997** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		100	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G57762**	RunNo: **57762**
Prep Date:	Analysis Date: **2/18/2019**	SeqNo: **1933998** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	101	77.7	130			
Surr: BFB	23		20.00		114	72.8	125			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A57800**	RunNo: **57800**
Prep Date:	Analysis Date: **2/19/2019**	SeqNo: **1935078** Units: **µg/L**

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

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A57800**	RunNo: **57800**
Prep Date:	Analysis Date: **2/19/2019**	SeqNo: **1935078** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A57800**	RunNo: **57800**
Prep Date:	Analysis Date: **2/19/2019**	SeqNo: **1935079** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.8	70	130			
Toluene	18	1.0	20.00	0	91.9	70	130			
Chlorobenzene	19	1.0	20.00	0	93.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A57800**	RunNo: **57800**
Prep Date:	Analysis Date: **2/19/2019**	SeqNo: **1935079** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	89.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID: **1902673-002a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **STP1-NW**	Batch ID: **A57800**	RunNo: **57800**
Prep Date:	Analysis Date: **2/19/2019**	SeqNo: **1935084** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	18	1.0	20.00	0	90.5	70	130			
Chlorobenzene	19	1.0	20.00	0	95.7	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	67.6	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.2	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.9	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID: **1902673-002a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **STP1-NW**	Batch ID: **A57800**	RunNo: **57800**
Prep Date:	Analysis Date: **2/19/2019**	SeqNo: **1935085** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130	2.85	20	
Toluene	18	1.0	20.00	0	92.3	70	130	1.96	20	
Chlorobenzene	19	1.0	20.00	0	92.7	70	130	3.22	20	
1,1-Dichloroethene	22	1.0	20.00	0	112	67.6	130	1.07	20	
Trichloroethene (TCE)	18	1.0	20.00	0	91.7	70	130	1.68	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		108	70	130	0	0	
Surr: Toluene-d8	10		10.00		99.6	70	130	0	0	

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**
20-Mar-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **lcsd-43262**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **43262**	RunNo: **58098**
Prep Date: **2/20/2019**	Analysis Date: **3/4/2019**	SeqNo: **1947916** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	91	10	100.0	0	90.8	55.1	104	40.7	34.9	R
4-Chloro-3-methylphenol	200	10	200.0	0	100	57	115	37.6	30.2	R
2-Chlorophenol	180	10	200.0	0	89.0	43.4	112	31.8	49.5	
1,4-Dichlorobenzene	64	10	100.0	0	64.2	38	95.2	29.1	43.2	
2,4-Dinitrotoluene	91	10	100.0	0	90.6	55.1	96.7	49.5	49.9	
N-Nitrosodi-n-propylamine	100	10	100.0	0	104	55	112	38.2	42.1	
4-Nitrophenol	150	10	200.0	0	72.8	16.6	93	44.4	31.5	R
Pentachlorophenol	170	20	200.0	0	83.7	43.2	104	29.4	52.5	
Phenol	130	10	200.0	0	67.1	21.3	85.7	27.6	54.4	
Pyrene	92	10	100.0	0	92.3	64.9	105	31.4	30.7	R
1,2,4-Trichlorobenzene	71	10	100.0	0	70.7	42.6	107	26.3	48.1	
Surr: 2-Fluorophenol	81		200.0		40.7	15	101	0	0	
Surr: Phenol-d5	67		200.0		33.5	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		67.7	27.8	112	0	0	
Surr: Nitrobenzene-d5	54		100.0		53.7	33	113	0	0	
Surr: 2-Fluorobiphenyl	45		100.0		44.6	26.6	107	0	0	
Surr: 4-Terphenyl-d14	71		100.0		71.4	18.7	148	0	0	

Sample ID: **mb-43262**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43262**	RunNo: **58098**
Prep Date: **2/20/2019**	Analysis Date: **3/4/2019**	SeqNo: **1947918** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.5	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**
20-Mar-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **mb-43262**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43262**	RunNo: **58098**
Prep Date: **2/20/2019**	Analysis Date: **3/4/2019**	SeqNo: **1947918** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **mb-43262**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43262**	RunNo: **58098**
Prep Date: **2/20/2019**	Analysis Date: **3/4/2019**	SeqNo: **1947918** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	75		200.0		37.3	15	101			
Surr: Phenol-d5	57		200.0		28.3	15	84.6			
Surr: 2,4,6-Tribromophenol	110		200.0		54.3	27.8	112			
Surr: Nitrobenzene-d5	54		100.0		53.6	33	113			
Surr: 2-Fluorobiphenyl	39		100.0		38.6	26.6	107			
Surr: 4-Terphenyl-d14	62		100.0		61.8	18.7	148			

Sample ID: **lcs-43262**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **43262**	RunNo: **58171**
Prep Date: **2/20/2019**	Analysis Date: **3/6/2019**	SeqNo: **1950814** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.0	55.1	104			
4-Chloro-3-methylphenol	150	10	200.0	0	77.4	57	115			
2-Chlorophenol	140	10	200.0	0	67.9	43.4	112			
1,4-Dichlorobenzene	49	10	100.0	0	49.0	38	95.2			
2,4-Dinitrotoluene	64	10	100.0	0	64.0	55.1	96.7			
N-Nitrosodi-n-propylamine	78	10	100.0	0	78.0	55	112			
4-Nitrophenol	110	10	200.0	0	53.9	16.6	93			
Pentachlorophenol	130	20	200.0	0	62.8	43.2	104			
Phenol	100	10	200.0	0	52.3	21.3	85.7			
Pyrene	66	10	100.0	0	66.3	64.9	105			
1,2,4-Trichlorobenzene	54	10	100.0	0	54.4	42.6	107			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902673**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **lcs-43262**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **43262**	RunNo: **58171**
Prep Date: **2/20/2019**	Analysis Date: **3/6/2019**	SeqNo: **1950814** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	51		200.0		25.3	15	101			
Surr: Phenol-d5	41		200.0		20.7	15	84.6			
Surr: 2,4,6-Tribromophenol	81		200.0		40.6	27.8	112			
Surr: Nitrobenzene-d5	33		100.0		32.6	33	113			S
Surr: 2-Fluorobiphenyl	25		100.0		24.6	26.6	107			S
Surr: 4-Terphenyl-d14	43		100.0		43.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1902673** RcptNo: **1**

Received By: **Desiree Dominguez** **2/14/2019 2:00:00 PM** DD

Completed By: **Victoria Zellar** **2/14/2019 4:03:37 PM** Victoria Zellar

Reviewed By: VVZ 2/14/19 (unpreserved) /ENM 2/15/19 LB: YG 2/15/19
LB: DAD 2/14/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 27
(<2 or >12 unless noted)
Adjusted? no
Checked by: YG 2/15/19

Special Handling (if applicable)

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

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

Client:	MARATHON - Western Refining
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road, Gallup, NM 87301
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	A-02/19/19
☐ Standard	☒ Level 4 (Full Validation)
Accreditation:	
☐ NELAP	☐ Other
☐ EDD (Type)	

Turn-Around Time:	
X Standard	Rush
Project Name:	2019 1ST QTR GW SAMPLING
Project #:	
	STP1-NW, OW59/60, MKTF
Project Manager:	BRIAN MOORE
Sampler:	CAJohnson1@marathonpetroleum.com
On Ice:	☒ Yes ☐ No
Sample Temperature:	4.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1902673	8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB									Air Bubbles (Y or N)
2/13/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X															
2/13/2019		AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	~~-010~~ -011	X															
2/13/2019	1340	AQUEOUS	STP1-NW	MISC	MISC	-002	X	X		X	X	X										
2/13/2019	1410	AQUEOUS	MKTF-44	MISC	MISC	-003	X	X	X	X	X	X										
2/13/2019	1440	AQUEOUS	MKTF-43	MISC	MISC	-004	X	X	X	X	X	X										
2/13/2019	1450	AQUEOUS	DUPLICATE	MISC	MISC	-005	X	X	X	X	X	X										
2/13/2019	1510	AQUEOUS	MKTF-42	MISC	MISC	-006	X	X	2	X	X	X	X									
2/13/2019	1538	AQUEOUS	MKTF-32	MISC	MISC	-007	X	X	X	X	X	X	X									
2/13/2019	1600	AQUEOUS	MKTF-41	MISC	MISC	-008	X	X	X	X	X	X	X									
2/13/2019	1620	AQUEOUS	OW-59	MISC	MISC	-009	X	X	X	X	X	X										
2/13/2019	1640	AQUEOUS	OW-60	MISC	MISC	-010	X	X	X	X	X	X										

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/14/19	1030		Courier	2/14/19	14:00
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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

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

March 20, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 1st QTR GW Sampling OrderNo.: 1902922

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 12 sample(s) on 2/21/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 7:00:00 AM
Lab ID: 1902922-001
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.46	0.17	1.0	J	µg/L	1	2/22/2019 2:41:00 PM	R57879
Toluene	0.38	0.17	1.0	J	µg/L	1	2/22/2019 2:41:00 PM	R57879
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Naphthalene	ND	0.29	2.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Acetone	ND	0.76	10		µg/L	1	2/22/2019 2:41:00 PM	R57879
Bromobenzene	ND	0.32	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Bromoform	ND	0.32	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Bromomethane	ND	0.27	3.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
2-Butanone	ND	1.4	10		µg/L	1	2/22/2019 2:41:00 PM	R57879
Carbon disulfide	ND	0.39	10		µg/L	1	2/22/2019 2:41:00 PM	R57879
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Chloroethane	ND	0.16	2.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Chloroform	ND	0.24	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Chloromethane	ND	0.32	3.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Dibromomethane	ND	0.32	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/22/2019 2:41:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 7:00:00 AM
Lab ID: 1902922-001 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
2-Hexanone	ND	0.91	10		µg/L	1	2/22/2019 2:41:00 PM	R57879
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/22/2019 2:41:00 PM	R57879
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Styrene	ND	0.25	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/22/2019 2:41:00 PM	R57879
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/22/2019 2:41:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	2/22/2019 2:41:00 PM	R57879
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	2/22/2019 2:41:00 PM	R57879
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	2/22/2019 2:41:00 PM	R57879
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	2/22/2019 2:41:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Sampling
Collection Date:
Lab ID: 1902922-002 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Toluene	ND	0.17	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Naphthalene	ND	0.29	2.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Acetone	ND	0.76	10		µg/L	1	2/22/2019 3:05:00 PM	R57879
Bromobenzene	ND	0.32	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Bromoform	ND	0.32	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Bromomethane	ND	0.27	3.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
2-Butanone	ND	1.4	10		µg/L	1	2/22/2019 3:05:00 PM	R57879
Carbon disulfide	ND	0.39	10		µg/L	1	2/22/2019 3:05:00 PM	R57879
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Chloroethane	ND	0.16	2.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Chloroform	ND	0.24	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Chloromethane	ND	0.32	3.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Dibromomethane	ND	0.32	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/22/2019 3:05:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Sampling
Collection Date:
Lab ID: 1902922-002
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
2-Hexanone	ND	0.91	10		µg/L	1	2/22/2019 3:05:00 PM	R57879
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/22/2019 3:05:00 PM	R57879
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Styrene	ND	0.25	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/22/2019 3:05:00 PM	R57879
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/22/2019 3:05:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	2/22/2019 3:05:00 PM	R57879
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	2/22/2019 3:05:00 PM	R57879
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	2/22/2019 3:05:00 PM	R57879
Surr: Toluene-d8	98.6	0	70-130		%Rec	1	2/22/2019 3:05:00 PM	R57879

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 9:33:00 AM
Lab ID: 1902922-003
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	6.8	0.35	1.0		mg/L	1	2/26/2019 3:05:09 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 3:05:09 AM	43296
Surr: DNOP	99.7	0	70-130		%Rec	1	2/26/2019 3:05:09 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	25	0.42	1.0		mg/L	20	2/22/2019 1:43:18 PM	G57873
Surr: BFB	97.6	0	72.8-125		%Rec	20	2/22/2019 1:43:18 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 2:10:09 PM	R57874
Chloride	150	10	10		mg/L	20	2/21/2019 2:23:01 PM	R57874
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 2:10:09 PM	R57874
Bromide	2.0	0.068	0.50		mg/L	5	2/21/2019 2:10:09 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 2:10:09 PM	R57874
Phosphorus, Orthophosphate (As P)	1.9	0.13	2.5	J	mg/L	5	2/21/2019 2:10:09 PM	R57874
Sulfate	2.5	0.32	2.5		mg/L	5	2/21/2019 2:10:09 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.7	0.0032	0.010	*	mg/L	5	2/26/2019 10:10:30 AM	A57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 10:08:30 AM	A57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 10:08:30 AM	A57957
Calcium	120	0.31	5.0		mg/L	5	2/26/2019 10:10:30 AM	A57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 10:08:30 AM	A57957
Copper	0.0016	0.0013	0.0060	J	mg/L	1	2/26/2019 10:08:30 AM	A57957
Iron	2.3	0.044	0.10	*	mg/L	5	2/26/2019 10:10:30 AM	A57957
Magnesium	16	0.050	1.0		mg/L	1	2/26/2019 10:08:30 AM	A57957
Manganese	2.1	0.0014	0.010	*	mg/L	5	2/26/2019 10:10:30 AM	A57957
Potassium	0.79	0.16	1.0	J	mg/L	1	2/26/2019 10:08:30 AM	A57957
Silver	0.0018	0.00094	0.0050	J	mg/L	1	2/26/2019 10:08:30 AM	A57957
Sodium	260	2.1	5.0		mg/L	5	2/26/2019 10:10:30 AM	A57957
Zinc	0.030	0.0023	0.010		mg/L	1	2/26/2019 10:08:30 AM	A57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	4.1	0.0032	0.010	*	mg/L	5	2/28/2019 9:16:05 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 9:14:05 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 9:14:05 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 9:14:05 PM	43379
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 9:14:05 PM	43379
Iron	5.3	0.087	0.20	*	mg/L	10	3/4/2019 4:12:07 PM	43379
Manganese	2.4	0.0014	0.010	*	mg/L	5	2/28/2019 9:16:05 PM	43379
Silver	0.0024	0.0014	0.0050	J	mg/L	1	2/28/2019 9:14:05 PM	43379

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 9:33:00 AM
Lab ID: 1902922-003
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	3/4/2019 4:03:15 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00029	0.00020	0.0010	J	mg/L	1	2/22/2019 2:00:45 PM	A57901
Arsenic	0.0032	0.000068	0.0010		mg/L	1	2/22/2019 2:00:45 PM	A57901
Lead	0.000069	0.000047	0.00050	J	mg/L	1	2/22/2019 2:00:45 PM	A57901
Selenium	ND	0.00020	0.0010		mg/L	1	2/22/2019 2:00:45 PM	A57901
Thallium	ND	0.000032	0.00050		mg/L	1	2/22/2019 2:00:45 PM	A57901
Uranium	0.00042	0.000030	0.00050	J	mg/L	1	2/22/2019 2:00:45 PM	A57901
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/1/2019 2:11:45 PM	43379
Arsenic	0.0045	0.00031	0.0010		mg/L	1	3/1/2019 4:01:00 PM	43379
Lead	0.0015	0.000055	0.00050		mg/L	1	3/1/2019 2:11:45 PM	43379
Selenium	ND	0.00048	0.0010		mg/L	1	3/1/2019 4:01:00 PM	43379
Thallium	ND	0.000052	0.00050		mg/L	1	3/1/2019 2:11:45 PM	43379
Uranium	0.00044	0.000085	0.00050	J	mg/L	1	3/1/2019 2:11:45 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000048	0.000038	0.00020	J	mg/L	1	3/7/2019 4:06:33 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Benzoic acid	36	6.3	20		µg/L	1	3/6/2019 11:27:08 AM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 11:27:08 AM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 9:33:00 AM
Lab ID: 1902922-003
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 11:27:08 AM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 11:27:08 AM	43384
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 11:27:08 AM	43384
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/6/2019 11:27:08 AM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 11:27:08 AM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 11:27:08 AM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 11:27:08 AM	43384
1-Methylnaphthalene	97	7.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2-Methylnaphthalene	30	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2-Methylphenol	ND	6.3	10		µg/L	1	3/6/2019 11:27:08 AM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 11:27:08 AM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 11:27:08 AM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 11:27:08 AM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Naphthalene	89	5.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 11:27:08 AM	43384

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 9:33:00 AM
Lab ID: 1902922-003 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 11:27:08 AM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Phenol	58	6.0	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 11:27:08 AM	43384
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 11:27:08 AM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 11:27:08 AM	43384
Surr: 2-Fluorophenol	51.2	0	15-101		%Rec	1	3/6/2019 11:27:08 AM	43384
Surr: Phenol-d5	40.1	0	15-84.6		%Rec	1	3/6/2019 11:27:08 AM	43384
Surr: 2,4,6-Tribromophenol	70.9	0	27.8-112		%Rec	1	3/6/2019 11:27:08 AM	43384
Surr: Nitrobenzene-d5	70.0	0	33-113		%Rec	1	3/6/2019 11:27:08 AM	43384
Surr: 2-Fluorobiphenyl	56.3	0	26.6-107		%Rec	1	3/6/2019 11:27:08 AM	43384
Surr: 4-Terphenyl-d14	54.7	0	18.7-148		%Rec	1	3/6/2019 11:27:08 AM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	12000	35	200		µg/L	200	2/22/2019 3:30:00 PM	R57879
Toluene	89	3.4	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Ethylbenzene	560	4.5	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Methyl tert-butyl ether (MTBE)	110	9.1	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Naphthalene	150	5.8	40		µg/L	20	2/22/2019 3:54:00 PM	R57879
1-Methylnaphthalene	120	6.7	80		µg/L	20	2/22/2019 3:54:00 PM	R57879
2-Methylnaphthalene	37	6.9	80	J	µg/L	20	2/22/2019 3:54:00 PM	R57879
Acetone	ND	15	200		µg/L	20	2/22/2019 3:54:00 PM	R57879
Bromobenzene	ND	6.4	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Bromodichloromethane	ND	5.7	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Bromoform	ND	6.5	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Bromomethane	ND	5.5	60		µg/L	20	2/22/2019 3:54:00 PM	R57879
2-Butanone	ND	28	200		µg/L	20	2/22/2019 3:54:00 PM	R57879
Carbon disulfide	ND	7.7	200		µg/L	20	2/22/2019 3:54:00 PM	R57879
Carbon Tetrachloride	ND	2.7	20		µg/L	20	2/22/2019 3:54:00 PM	R57879

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 9:33:00 AM
Lab ID: 1902922-003
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	5.8	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Chloroethane	ND	3.3	40		µg/L	20	2/22/2019 3:54:00 PM	R57879
Chloroform	ND	4.7	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Chloromethane	ND	6.4	60		µg/L	20	2/22/2019 3:54:00 PM	R57879
2-Chlorotoluene	ND	5.0	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
4-Chlorotoluene	ND	5.6	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
cis-1,2-DCE	ND	7.5	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	2/22/2019 3:54:00 PM	R57879
Dibromochloromethane	ND	4.7	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Dibromomethane	ND	6.4	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,1-Dichloroethane	ND	3.5	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,1-Dichloroethene	ND	2.4	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2-Dichloropropane	ND	3.3	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,3-Dichloropropane	ND	5.4	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
2,2-Dichloropropane	ND	4.7	40		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,1-Dichloropropene	ND	3.3	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Hexachlorobutadiene	ND	7.8	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
2-Hexanone	ND	18	200		µg/L	20	2/22/2019 3:54:00 PM	R57879
Isopropylbenzene	16	4.4	20	J	µg/L	20	2/22/2019 3:54:00 PM	R57879
4-Isopropyltoluene	ND	4.8	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	2/22/2019 3:54:00 PM	R57879
Methylene Chloride	ND	4.1	60		µg/L	20	2/22/2019 3:54:00 PM	R57879
n-Butylbenzene	5.8	5.0	60	J	µg/L	20	2/22/2019 3:54:00 PM	R57879
n-Propylbenzene	50	4.9	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
sec-Butylbenzene	ND	4.0	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Styrene	ND	5.0	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
tert-Butylbenzene	ND	4.4	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	2/22/2019 3:54:00 PM	R57879
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
trans-1,2-DCE	ND	3.6	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	2/22/2019 3:54:00 PM	R57879

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 9:33:00 AM
Lab ID: 1902922-003
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Trichlorofluoromethane	ND	2.9	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
1,2,3-Trichloropropane	ND	11	40		µg/L	20	2/22/2019 3:54:00 PM	R57879
Vinyl chloride	ND	2.4	20		µg/L	20	2/22/2019 3:54:00 PM	R57879
Xylenes, Total	120	13	30		µg/L	20	2/22/2019 3:54:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	117	0	70-130		%Rec	20	2/22/2019 3:54:00 PM	R57879
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	20	2/22/2019 3:54:00 PM	R57879
Surr: Dibromofluoromethane	108	0	70-130		%Rec	20	2/22/2019 3:54:00 PM	R57879
Surr: Toluene-d8	99.4	0	70-130		%Rec	20	2/22/2019 3:54:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:06:00 AM
Lab ID: 1902922-004
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	6.0	0.35	1.0		mg/L	1	2/26/2019 3:27:16 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 3:27:16 AM	43296
Surr: DNOP	100	0	70-130		%Rec	1	2/26/2019 3:27:16 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	28	1.1	2.5		mg/L	50	2/22/2019 2:51:38 PM	G57873
Surr: BFB	107	0	72.8-125		%Rec	50	2/22/2019 2:51:38 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.42	0.25	0.50	J	mg/L	5	2/21/2019 2:35:52 PM	R57874
Chloride	99	2.5	2.5		mg/L	5	2/21/2019 2:35:52 PM	R57874
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 2:35:52 PM	R57874
Bromide	0.48	0.068	0.50	J	mg/L	5	2/21/2019 2:35:52 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 2:35:52 PM	R57874
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/21/2019 2:35:52 PM	R57874
Sulfate	0.40	0.32	2.5	J	mg/L	5	2/21/2019 2:35:52 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.8	0.0032	0.010	*	mg/L	5	2/26/2019 10:14:51 AM	A57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 10:12:52 AM	A57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 10:12:52 AM	A57957
Calcium	82	0.062	1.0		mg/L	1	2/26/2019 10:12:52 AM	A57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 10:12:52 AM	A57957
Copper	ND	0.0013	0.0060		mg/L	1	2/26/2019 10:12:52 AM	A57957
Iron	5.2	0.087	0.20	*	mg/L	10	2/26/2019 12:32:16 PM	C57957
Magnesium	15	0.050	1.0		mg/L	1	2/26/2019 10:12:52 AM	A57957
Manganese	1.1	0.0014	0.010	*	mg/L	5	2/26/2019 10:14:51 AM	A57957
Potassium	0.43	0.16	1.0	J	mg/L	1	2/26/2019 10:12:52 AM	A57957
Silver	0.00095	0.00094	0.0050	J	mg/L	1	2/26/2019 10:12:52 AM	A57957
Sodium	280	2.1	5.0		mg/L	5	2/26/2019 10:14:51 AM	A57957
Zinc	0.036	0.0023	0.010		mg/L	1	2/26/2019 10:12:52 AM	A57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	4.0	0.0032	0.010	*	mg/L	5	2/28/2019 9:20:10 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 9:18:10 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 9:18:10 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 9:18:10 PM	43379
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 9:18:10 PM	43379
Iron	5.7	0.087	0.20	*	mg/L	10	3/4/2019 4:16:24 PM	43379
Manganese	1.2	0.0014	0.010	*	mg/L	5	2/28/2019 9:20:10 PM	43379
Silver	0.0015	0.0014	0.0050	J	mg/L	1	2/28/2019 9:18:10 PM	43379

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:06:00 AM
Lab ID: 1902922-004
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	3/4/2019 4:14:25 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/25/2019 5:48:17 PM	B57938
Arsenic	0.011	0.000068	0.0010	*	mg/L	1	2/25/2019 5:48:17 PM	B57938
Lead	ND	0.000047	0.00050		mg/L	1	2/25/2019 5:48:17 PM	B57938
Selenium	ND	0.00020	0.0010		mg/L	1	2/25/2019 5:48:17 PM	B57938
Thallium	ND	0.000032	0.00050		mg/L	1	2/25/2019 5:48:17 PM	B57938
Uranium	0.00040	0.000030	0.00050	J	mg/L	1	2/25/2019 5:48:17 PM	B57938
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/1/2019 2:17:37 PM	43379
Arsenic	0.011	0.00031	0.0010	*	mg/L	1	3/1/2019 4:02:57 PM	43379
Lead	0.00018	0.000055	0.00050	J	mg/L	1	3/1/2019 2:17:37 PM	43379
Selenium	ND	0.00048	0.0010		mg/L	1	3/1/2019 4:02:57 PM	43379
Thallium	ND	0.000052	0.00050		mg/L	1	3/1/2019 2:17:37 PM	43379
Uranium	0.00044	0.000085	0.00050	J	mg/L	1	3/1/2019 2:17:37 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000048	0.000038	0.00020	J	mg/L	1	3/7/2019 4:13:14 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Benzoic acid	37	6.3	20		µg/L	1	3/6/2019 11:56:25 AM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 11:56:25 AM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:06:00 AM
Lab ID: 1902922-004
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 11:56:25 AM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 11:56:25 AM	43384
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 11:56:25 AM	43384
2,4-Dimethylphenol	11	5.9	10		µg/L	1	3/6/2019 11:56:25 AM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 11:56:25 AM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 11:56:25 AM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 11:56:25 AM	43384
1-Methylnaphthalene	64	7.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2-Methylnaphthalene	70	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2-Methylphenol	ND	6.3	10		µg/L	1	3/6/2019 11:56:25 AM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 11:56:25 AM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 11:56:25 AM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 11:56:25 AM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Naphthalene	180	5.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 11:56:25 AM	43384

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:06:00 AM
Lab ID: 1902922-004 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 11:56:25 AM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Phenol	23	6.0	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 11:56:25 AM	43384
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 11:56:25 AM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 11:56:25 AM	43384
Surr: 2-Fluorophenol	39.8	0	15-101		%Rec	1	3/6/2019 11:56:25 AM	43384
Surr: Phenol-d5	31.3	0	15-84.6		%Rec	1	3/6/2019 11:56:25 AM	43384
Surr: 2,4,6-Tribromophenol	66.8	0	27.8-112		%Rec	1	3/6/2019 11:56:25 AM	43384
Surr: Nitrobenzene-d5	51.0	0	33-113		%Rec	1	3/6/2019 11:56:25 AM	43384
Surr: 2-Fluorobiphenyl	41.2	0	26.6-107		%Rec	1	3/6/2019 11:56:25 AM	43384
Surr: 4-Terphenyl-d14	53.4	0	18.7-148		%Rec	1	3/6/2019 11:56:25 AM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	10000	35	200		µg/L	200	2/22/2019 4:18:00 PM	R57879
Toluene	65	3.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Ethylbenzene	1100	4.5	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Methyl tert-butyl ether (MTBE)	41	9.1	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2,4-Trimethylbenzene	8.6	5.1	20	J	µg/L	20	2/22/2019 4:42:00 PM	R57879
1,3,5-Trimethylbenzene	22	4.6	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Naphthalene	320	5.8	40		µg/L	20	2/22/2019 4:42:00 PM	R57879
1-Methylnaphthalene	76	6.7	80	J	µg/L	20	2/22/2019 4:42:00 PM	R57879
2-Methylnaphthalene	87	6.9	80		µg/L	20	2/22/2019 4:42:00 PM	R57879
Acetone	ND	15	200		µg/L	20	2/22/2019 4:42:00 PM	R57879
Bromobenzene	ND	6.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Bromodichloromethane	ND	5.7	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Bromoform	ND	6.5	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Bromomethane	ND	5.5	60		µg/L	20	2/22/2019 4:42:00 PM	R57879
2-Butanone	ND	28	200		µg/L	20	2/22/2019 4:42:00 PM	R57879
Carbon disulfide	ND	7.7	200		µg/L	20	2/22/2019 4:42:00 PM	R57879
Carbon Tetrachloride	ND	2.7	20		µg/L	20	2/22/2019 4:42:00 PM	R57879

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:06:00 AM
Lab ID: 1902922-004 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	5.8	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Chloroethane	ND	3.3	40		µg/L	20	2/22/2019 4:42:00 PM	R57879
Chloroform	ND	4.7	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Chloromethane	ND	6.4	60		µg/L	20	2/22/2019 4:42:00 PM	R57879
2-Chlorotoluene	ND	5.0	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
4-Chlorotoluene	ND	5.6	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
cis-1,2-DCE	ND	7.5	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	2/22/2019 4:42:00 PM	R57879
Dibromochloromethane	ND	4.7	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Dibromomethane	ND	6.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,1-Dichloroethane	ND	3.5	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,1-Dichloroethene	ND	2.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2-Dichloropropane	ND	3.3	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,3-Dichloropropane	ND	5.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
2,2-Dichloropropane	ND	4.7	40		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,1-Dichloropropene	ND	3.3	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Hexachlorobutadiene	ND	7.8	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
2-Hexanone	ND	18	200		µg/L	20	2/22/2019 4:42:00 PM	R57879
Isopropylbenzene	51	4.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
4-Isopropyltoluene	ND	4.8	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	2/22/2019 4:42:00 PM	R57879
Methylene Chloride	ND	4.1	60		µg/L	20	2/22/2019 4:42:00 PM	R57879
n-Butylbenzene	23	5.0	60	J	µg/L	20	2/22/2019 4:42:00 PM	R57879
n-Propylbenzene	170	4.9	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
sec-Butylbenzene	9.5	4.0	20	J	µg/L	20	2/22/2019 4:42:00 PM	R57879
Styrene	ND	5.0	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
tert-Butylbenzene	ND	4.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	2/22/2019 4:42:00 PM	R57879
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
trans-1,2-DCE	ND	3.6	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	2/22/2019 4:42:00 PM	R57879

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:06:00 AM
Lab ID: 1902922-004 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Trichlorofluoromethane	ND	2.9	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
1,2,3-Trichloropropane	ND	11	40		µg/L	20	2/22/2019 4:42:00 PM	R57879
Vinyl chloride	ND	2.4	20		µg/L	20	2/22/2019 4:42:00 PM	R57879
Xylenes, Total	360	13	30		µg/L	20	2/22/2019 4:42:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	20	2/22/2019 4:42:00 PM	R57879
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	20	2/22/2019 4:42:00 PM	R57879
Surr: Dibromofluoromethane	108	0	70-130		%Rec	20	2/22/2019 4:42:00 PM	R57879
Surr: Toluene-d8	99.4	0	70-130		%Rec	20	2/22/2019 4:42:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:55:00 AM
Lab ID: 1902922-005 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 3:01:37 PM	R57874
Chloride	33	2.5	2.5		mg/L	5	2/21/2019 3:01:37 PM	R57874
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 3:01:37 PM	R57874
Bromide	0.14	0.068	0.50	J	mg/L	5	2/21/2019 3:01:37 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 3:01:37 PM	R57874
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/21/2019 3:01:37 PM	R57874
Sulfate	730	1.3	10		mg/L	20	2/21/2019 3:14:28 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.0099	0.00065	0.0020		mg/L	1	2/26/2019 10:23:39 AM	A57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 10:23:39 AM	A57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 10:23:39 AM	A57957
Calcium	250	0.31	5.0		mg/L	5	2/26/2019 10:25:49 AM	A57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 10:23:39 AM	A57957
Copper	ND	0.0013	0.0060		mg/L	1	2/26/2019 10:23:39 AM	A57957
Iron	0.033	0.0087	0.020		mg/L	1	2/26/2019 10:23:39 AM	A57957
Magnesium	47	0.050	1.0		mg/L	1	2/26/2019 10:23:39 AM	A57957
Manganese	0.0013	0.00029	0.0020	J	mg/L	1	2/26/2019 10:23:39 AM	A57957
Potassium	1.4	0.16	1.0		mg/L	1	2/26/2019 10:23:39 AM	A57957
Silver	0.0040	0.00094	0.0050	J	mg/L	1	2/26/2019 10:23:39 AM	A57957
Sodium	62	0.42	1.0		mg/L	1	2/26/2019 10:23:39 AM	A57957
Zinc	0.029	0.0023	0.010		mg/L	1	2/26/2019 12:34:34 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.011	0.00065	0.0020		mg/L	1	2/28/2019 7:15:10 PM	D58024
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 7:15:10 PM	D58024
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 7:15:10 PM	D58024
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 7:15:10 PM	D58024
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 7:15:10 PM	D58024
Iron	0.035	0.0087	0.020		mg/L	1	2/28/2019 7:15:10 PM	D58024
Manganese	0.0012	0.00029	0.0020	J	mg/L	1	2/28/2019 7:15:10 PM	D58024
Silver	0.0058	0.0014	0.0050		mg/L	1	2/28/2019 7:15:10 PM	D58024
Zinc	ND	0.0058	0.010		mg/L	1	2/28/2019 7:15:10 PM	D58024
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/25/2019 5:50:42 PM	B57938
Arsenic	0.0037	0.000068	0.0010		mg/L	1	2/25/2019 5:50:42 PM	B57938
Lead	ND	0.000047	0.00050		mg/L	1	2/25/2019 5:50:42 PM	B57938
Selenium	0.00089	0.00020	0.0010	J	mg/L	1	2/25/2019 5:50:42 PM	B57938
Thallium	ND	0.000032	0.00050		mg/L	1	2/25/2019 5:50:42 PM	B57938
Uranium	0.0014	0.000030	0.00050		mg/L	1	2/25/2019 5:50:42 PM	B57938

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:55:00 AM
Lab ID: 1902922-005
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/25/2019 4:57:32 PM	A57938
Arsenic	0.0037	0.00031	0.0010		mg/L	1	2/25/2019 4:57:32 PM	A57938
Lead	ND	0.000047	0.00050		mg/L	1	2/25/2019 4:57:32 PM	A57938
Selenium	0.00079	0.00048	0.0010	J	mg/L	1	2/25/2019 4:57:32 PM	A57938
Thallium	ND	0.000052	0.00050		mg/L	1	2/25/2019 4:57:32 PM	A57938
Uranium	0.0014	0.000085	0.00050		mg/L	1	2/25/2019 4:57:32 PM	A57938
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	3/7/2019 4:15:28 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Benzoic acid	14	6.3	20	J	µg/L	1	3/6/2019 1:25:01 PM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 1:25:01 PM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 1:25:01 PM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 1:25:01 PM	43384

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

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Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 1:25:01 PM	43384
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/6/2019 1:25:01 PM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 1:25:01 PM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 1:25:01 PM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 1:25:01 PM	43384
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2-Methylphenol	ND	6.3	10		µg/L	1	3/6/2019 1:25:01 PM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 1:25:01 PM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 1:25:01 PM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 1:25:01 PM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Naphthalene	ND	5.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 1:25:01 PM	43384
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 1:25:01 PM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Phenol	ND	6.0	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 1:25:01 PM	43384

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 10:55:00 AM
Lab ID: 1902922-005 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 1:25:01 PM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 1:25:01 PM	43384
Surr: 2-Fluorophenol	42.4	0	15-101		%Rec	1	3/6/2019 1:25:01 PM	43384
Surr: Phenol-d5	31.3	0	15-84.6		%Rec	1	3/6/2019 1:25:01 PM	43384
Surr: 2,4,6-Tribromophenol	61.7	0	27.8-112		%Rec	1	3/6/2019 1:25:01 PM	43384
Surr: Nitrobenzene-d5	62.5	0	33-113		%Rec	1	3/6/2019 1:25:01 PM	43384
Surr: 2-Fluorobiphenyl	55.3	0	26.6-107		%Rec	1	3/6/2019 1:25:01 PM	43384
Surr: 4-Terphenyl-d14	57.2	0	18.7-148		%Rec	1	3/6/2019 1:25:01 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Toluene	ND	0.17	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Naphthalene	ND	0.29	2.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Acetone	ND	0.76	10		µg/L	1	2/22/2019 5:30:00 PM	R57879
Bromobenzene	ND	0.32	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Bromoform	ND	0.32	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Bromomethane	ND	0.27	3.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
2-Butanone	ND	1.4	10		µg/L	1	2/22/2019 5:30:00 PM	R57879
Carbon disulfide	ND	0.39	10		µg/L	1	2/22/2019 5:30:00 PM	R57879
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Chloroethane	ND	0.16	2.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Chloroform	ND	0.24	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Chloromethane	ND	0.32	3.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.32	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
2-Hexanone	ND	0.91	10		µg/L	1	2/22/2019 5:30:00 PM	R57879
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/22/2019 5:30:00 PM	R57879
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Styrene	ND	0.25	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/22/2019 5:30:00 PM	R57879
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/22/2019 5:30:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	2/22/2019 5:30:00 PM	R57879
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	2/22/2019 5:30:00 PM	R57879
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	2/22/2019 5:30:00 PM	R57879

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Lab ID: 1902922-005
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	2/22/2019 5:30:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:32:00 PM
Lab ID: 1902922-006
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	20	0.35	1.0		mg/L	1	2/26/2019 3:49:20 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 3:49:20 AM	43296
Surr: DNOP	102	0	70-130		%Rec	1	2/26/2019 3:49:20 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	40	0.21	0.50		mg/L	10	2/22/2019 3:14:14 PM	G57873
Surr: BFB	124	0	72.8-125		%Rec	10	2/22/2019 3:14:14 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 3:53:03 PM	R57874
Chloride	4600	250	250		mg/L	500	3/7/2019 12:07:52 AM	A58183
Nitrogen, Nitrite (As N)	1.6	1.4	2.0	J	mg/L	20	2/21/2019 4:05:55 PM	R57874
Bromide	1.7	0.068	0.50		mg/L	5	2/21/2019 3:53:03 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 3:53:03 PM	R57874
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/21/2019 3:53:03 PM	R57874
Sulfate	880	32	250		mg/L	500	3/7/2019 12:07:52 AM	A58183
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.13	0.00065	0.0020		mg/L	1	2/26/2019 10:28:03 AM	A57957
Beryllium	0.00034	0.00028	0.0020	J	mg/L	1	2/26/2019 10:28:03 AM	A57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 10:28:03 AM	A57957
Calcium	990	0.62	10		mg/L	10	2/26/2019 10:30:16 AM	A57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 10:28:03 AM	A57957
Copper	0.0036	0.0013	0.0060	J	mg/L	1	2/26/2019 10:28:03 AM	A57957
Iron	57	0.87	2.0	*	mg/L	100	2/26/2019 12:41:01 PM	C57957
Magnesium	280	0.50	10		mg/L	10	2/26/2019 10:30:16 AM	A57957
Manganese	14	0.0058	0.040	*	mg/L	20	2/26/2019 12:38:56 PM	C57957
Potassium	4.4	0.16	1.0		mg/L	1	2/26/2019 10:28:03 AM	A57957
Silver	0.0091	0.00094	0.0050		mg/L	1	2/26/2019 10:28:03 AM	A57957
Sodium	1800	21	50		mg/L	50	3/4/2019 8:05:46 PM	B58102
Zinc	0.046	0.0023	0.010		mg/L	1	2/26/2019 12:36:43 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.67	0.00065	0.0020		mg/L	1	2/28/2019 9:30:42 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 9:30:42 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 9:30:42 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 9:30:42 PM	43379
Copper	0.0054	0.0041	0.0060	J	mg/L	1	2/28/2019 9:30:42 PM	43379
Iron	63	0.87	2.0	*	mg/L	100	3/4/2019 4:25:15 PM	43379
Manganese	15	0.0058	0.040	*	mg/L	20	3/4/2019 4:23:10 PM	43379
Silver	0.011	0.0014	0.0050		mg/L	1	3/4/2019 4:20:56 PM	43379

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:32:00 PM
Lab ID: 1902922-006
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.041	0.0058	0.010		mg/L	1	3/4/2019 4:20:56 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	3/4/2019 7:27:16 PM	A58105
Arsenic	0.013	0.00050	0.0050	*	mg/L	5	3/12/2019 6:49:11 PM	A58321
Lead	0.0014	0.00054	0.0025	J	mg/L	5	2/27/2019 7:51:06 PM	B58014
Selenium	0.0017	0.00086	0.0050	J	mg/L	5	3/4/2019 7:27:16 PM	A58105
Thallium	ND	0.00066	0.0025		mg/L	5	2/27/2019 7:51:06 PM	B58014
Uranium	0.0029	0.00037	0.0025		mg/L	5	2/27/2019 7:51:06 PM	B58014
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	3/1/2019 4:04:54 PM	43379
Arsenic	0.017	0.0016	0.0050	*	mg/L	5	3/1/2019 4:04:54 PM	43379
Lead	0.0029	0.00027	0.0025		mg/L	5	3/1/2019 4:04:54 PM	43379
Selenium	ND	0.0024	0.0050		mg/L	5	3/1/2019 4:04:54 PM	43379
Thallium	ND	0.00026	0.0025		mg/L	5	3/1/2019 4:04:54 PM	43379
Uranium	0.0028	0.00042	0.0025		mg/L	5	3/1/2019 4:04:54 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	3/7/2019 4:17:43 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Acenaphthylene	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Aniline	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Anthracene	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Azobenzene	ND	34	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Benz(a)anthracene	ND	26	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Benzo(a)pyrene	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Benzo(b)fluoranthene	ND	36	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Benzo(k)fluoranthene	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Benzoic acid	ND	32	100		µg/L	1	3/6/2019 1:54:47 PM	43384
Benzyl alcohol	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Bis(2-ethylhexyl)phthalate	43	40	50	J	µg/L	1	3/6/2019 1:54:47 PM	43384
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Butyl benzyl phthalate	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Carbazole	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384

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Client Sample ID: MKTF-21
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:32:00 PM
Lab ID: 1902922-006
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	3/6/2019 1:54:47 PM	43384
4-Chloroaniline	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2-Chloronaphthalene	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2-Chlorophenol	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Chrysene	ND	34	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Di-n-butyl phthalate	ND	34	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Di-n-octyl phthalate	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Dibenzofuran	ND	34	50		µg/L	1	3/6/2019 1:54:47 PM	43384
1,2-Dichlorobenzene	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
1,3-Dichlorobenzene	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
1,4-Dichlorobenzene	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Diethyl phthalate	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Dimethyl phthalate	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2,4-Dichlorophenol	ND	29	100		µg/L	1	3/6/2019 1:54:47 PM	43384
2,4-Dimethylphenol	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	3/6/2019 1:54:47 PM	43384
2,4-Dinitrophenol	ND	19	100		µg/L	1	3/6/2019 1:54:47 PM	43384
2,4-Dinitrotoluene	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2,6-Dinitrotoluene	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Fluoranthene	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Fluorene	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Hexachlorobenzene	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Hexachlorobutadiene	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Hexachloroethane	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Isophorone	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
1-Methylnaphthalene	79	35	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2-Methylnaphthalene	69	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2-Methylphenol	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
3+4-Methylphenol	ND	27	50		µg/L	1	3/6/2019 1:54:47 PM	43384
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	3/6/2019 1:54:47 PM	43384
N-Nitrosodimethylamine	ND	34	50		µg/L	1	3/6/2019 1:54:47 PM	43384
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Naphthalene	160	25	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2-Nitroaniline	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384

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CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:32:00 PM
Lab ID: 1902922-006
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	34	50		µg/L	1	3/6/2019 1:54:47 PM	43384
4-Nitroaniline	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Nitrobenzene	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2-Nitrophenol	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
4-Nitrophenol	ND	28	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Pentachlorophenol	ND	26	100		µg/L	1	3/6/2019 1:54:47 PM	43384
Phenanthrene	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Phenol	ND	30	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Pyrene	ND	33	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Pyridine	ND	27	50		µg/L	1	3/6/2019 1:54:47 PM	43384
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	3/6/2019 1:54:47 PM	43384
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	3/6/2019 1:54:47 PM	43384
Surr: 2-Fluorophenol	4.46	0	15-101	S	%Rec	1	3/6/2019 1:54:47 PM	43384
Surr: Phenol-d5	9.72	0	15-84.6	S	%Rec	1	3/6/2019 1:54:47 PM	43384
Surr: 2,4,6-Tribromophenol	2.81	0	27.8-112	S	%Rec	1	3/6/2019 1:54:47 PM	43384
Surr: Nitrobenzene-d5	49.0	0	33-113		%Rec	1	3/6/2019 1:54:47 PM	43384
Surr: 2-Fluorobiphenyl	47.8	0	26.6-107		%Rec	1	3/6/2019 1:54:47 PM	43384
Surr: 4-Terphenyl-d14	47.6	0	18.7-148		%Rec	1	3/6/2019 1:54:47 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2000	35	200		µg/L	200	2/22/2019 5:54:00 PM	R57879
Toluene	16	3.4	20	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
Ethylbenzene	1200	4.5	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Methyl tert-butyl ether (MTBE)	15	9.1	20	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2,4-Trimethylbenzene	1500	5.1	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,3,5-Trimethylbenzene	590	4.6	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Naphthalene	320	5.8	40		µg/L	20	2/22/2019 6:18:00 PM	R57879
1-Methylnaphthalene	74	6.7	80	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
2-Methylnaphthalene	80	6.9	80	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
Acetone	ND	15	200		µg/L	20	2/22/2019 6:18:00 PM	R57879
Bromobenzene	ND	6.4	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Bromodichloromethane	ND	5.7	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Bromoform	ND	6.5	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Bromomethane	ND	5.5	60		µg/L	20	2/22/2019 6:18:00 PM	R57879
2-Butanone	ND	28	200		µg/L	20	2/22/2019 6:18:00 PM	R57879
Carbon disulfide	ND	7.7	200		µg/L	20	2/22/2019 6:18:00 PM	R57879
Carbon Tetrachloride	ND	2.7	20		µg/L	20	2/22/2019 6:18:00 PM	R57879

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Lab ID: 1902922-006
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	5.8	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Chloroethane	ND	3.3	40		µg/L	20	2/22/2019 6:18:00 PM	R57879
Chloroform	ND	4.7	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Chloromethane	ND	6.4	60		µg/L	20	2/22/2019 6:18:00 PM	R57879
2-Chlorotoluene	ND	5.0	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
4-Chlorotoluene	ND	5.6	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
cis-1,2-DCE	ND	7.5	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	2/22/2019 6:18:00 PM	R57879
Dibromochloromethane	ND	4.7	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Dibromomethane	ND	6.4	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,1-Dichloroethane	ND	3.5	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,1-Dichloroethene	ND	2.4	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2-Dichloropropane	ND	3.3	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,3-Dichloropropane	ND	5.4	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
2,2-Dichloropropane	ND	4.7	40		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,1-Dichloropropene	ND	3.3	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Hexachlorobutadiene	ND	7.8	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
2-Hexanone	ND	18	200		µg/L	20	2/22/2019 6:18:00 PM	R57879
Isopropylbenzene	11	4.4	20	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
4-Isopropyltoluene	6.0	4.8	20	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	2/22/2019 6:18:00 PM	R57879
Methylene Chloride	ND	4.1	60		µg/L	20	2/22/2019 6:18:00 PM	R57879
n-Butylbenzene	16	5.0	60	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
n-Propylbenzene	27	4.9	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
sec-Butylbenzene	6.5	4.0	20	J	µg/L	20	2/22/2019 6:18:00 PM	R57879
Styrene	ND	5.0	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
tert-Butylbenzene	ND	4.4	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	2/22/2019 6:18:00 PM	R57879
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
trans-1,2-DCE	ND	3.6	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	2/22/2019 6:18:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:32:00 PM
Lab ID: 1902922-006
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Trichlorofluoromethane	ND	2.9	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
1,2,3-Trichloropropane	ND	11	40		µg/L	20	2/22/2019 6:18:00 PM	R57879
Vinyl chloride	ND	2.4	20		µg/L	20	2/22/2019 6:18:00 PM	R57879
Xylenes, Total	7100	130	300		µg/L	200	2/22/2019 5:54:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	20	2/22/2019 6:18:00 PM	R57879
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	20	2/22/2019 6:18:00 PM	R57879
Surr: Dibromofluoromethane	104	0	70-130		%Rec	20	2/22/2019 6:18:00 PM	R57879
Surr: Toluene-d8	97.8	0	70-130		%Rec	20	2/22/2019 6:18:00 PM	R57879

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:40:00 PM
Lab ID: 1902922-007
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	9.8	0.35	1.0		mg/L	1	2/26/2019 4:11:25 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 4:11:25 AM	43296
Surr: DNOP	98.6	0	70-130		%Rec	1	2/26/2019 4:11:25 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	7.3	0.42	1.0		mg/L	20	2/22/2019 3:36:51 PM	G57873
Surr: BFB	97.2	0	72.8-125		%Rec	20	2/22/2019 3:36:51 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 4:18:48 PM	R57874
Chloride	760	25	25		mg/L	50	3/7/2019 12:20:43 AM	A58183
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 4:18:48 PM	R57874
Bromide	0.95	0.068	0.50		mg/L	5	2/21/2019 4:18:48 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 4:18:48 PM	R57874
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/21/2019 4:18:48 PM	R57874
Sulfate	11	0.32	2.5		mg/L	5	2/21/2019 4:18:48 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.6	0.0032	0.010	*	mg/L	5	2/26/2019 10:32:26 AM	A57957
Beryllium	ND	0.0014	0.010		mg/L	5	2/26/2019 10:32:26 AM	A57957
Cadmium	ND	0.0028	0.010		mg/L	5	2/26/2019 10:32:26 AM	A57957
Calcium	270	0.31	5.0		mg/L	5	2/26/2019 10:32:26 AM	A57957
Chromium	ND	0.0077	0.030		mg/L	5	2/26/2019 10:32:26 AM	A57957
Copper	0.0094	0.0065	0.030	J	mg/L	5	2/26/2019 10:32:26 AM	A57957
Iron	47	0.44	1.0	*	mg/L	50	2/26/2019 10:34:24 AM	A57957
Magnesium	39	0.25	5.0		mg/L	5	2/26/2019 10:32:26 AM	A57957
Manganese	5.5	0.014	0.10	*	mg/L	50	2/26/2019 10:34:24 AM	A57957
Potassium	15	0.81	5.0		mg/L	5	2/26/2019 10:32:26 AM	A57957
Silver	ND	0.0047	0.025		mg/L	5	2/26/2019 10:32:26 AM	A57957
Sodium	290	2.1	5.0		mg/L	5	2/26/2019 10:32:26 AM	A57957
Zinc	0.16	0.011	0.050		mg/L	5	2/26/2019 12:43:18 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	3.9	0.0032	0.010	*	mg/L	5	2/28/2019 9:36:55 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 9:34:55 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 9:34:55 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 9:34:55 PM	43379
Copper	0.045	0.0041	0.0060		mg/L	1	2/28/2019 9:34:55 PM	43379
Iron	58	0.87	2.0	*	mg/L	100	3/4/2019 4:31:14 PM	43379
Manganese	5.5	0.0029	0.020	*	mg/L	10	3/4/2019 4:29:14 PM	43379
Silver	ND	0.0014	0.0050		mg/L	1	2/28/2019 9:34:55 PM	43379

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:40:00 PM
Lab ID: 1902922-007
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.52	0.0058	0.010		mg/L	1	3/4/2019 4:27:14 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/25/2019 5:55:31 PM	B57938
Arsenic	0.036	0.00034	0.0050	*	mg/L	5	2/25/2019 5:55:31 PM	B57938
Lead	0.0035	0.00024	0.0025		mg/L	5	2/25/2019 5:55:31 PM	B57938
Selenium	ND	0.0010	0.0050		mg/L	5	2/25/2019 5:55:31 PM	B57938
Thallium	ND	0.00016	0.0025		mg/L	5	2/25/2019 5:55:31 PM	B57938
Uranium	0.0012	0.00015	0.0025	J	mg/L	5	2/25/2019 5:55:31 PM	B57938
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00078	0.00039	0.0010	J	mg/L	1	3/1/2019 2:21:31 PM	43379
Arsenic	0.045	0.00031	0.0010	*	mg/L	1	3/1/2019 4:07:47 PM	43379
Lead	0.010	0.000055	0.00050		mg/L	1	3/1/2019 2:21:31 PM	43379
Selenium	0.00065	0.00048	0.0010	J	mg/L	1	3/1/2019 4:07:47 PM	43379
Thallium	0.000061	0.000052	0.00050	J	mg/L	1	3/1/2019 2:21:31 PM	43379
Uranium	0.0018	0.000085	0.00050		mg/L	1	3/1/2019 2:21:31 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000073	0.000038	0.00020	J	mg/L	1	3/7/2019 4:19:59 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Acenaphthylene	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Aniline	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Anthracene	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Azobenzene	ND	34	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Benz(a)anthracene	ND	26	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Benzo(a)pyrene	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Benzo(b)fluoranthene	ND	36	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Benzo(k)fluoranthene	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Benzoic acid	44	32	100	J	µg/L	1	3/6/2019 2:24:33 PM	43384
Benzyl alcohol	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	3/6/2019 2:24:33 PM	43384
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Butyl benzyl phthalate	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Carbazole	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:40:00 PM
Lab ID: 1902922-007
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	3/6/2019 2:24:33 PM	43384
4-Chloroaniline	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2-Chloronaphthalene	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2-Chlorophenol	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Chrysene	ND	34	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Di-n-butyl phthalate	ND	34	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Di-n-octyl phthalate	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Dibenzofuran	ND	34	50		µg/L	1	3/6/2019 2:24:33 PM	43384
1,2-Dichlorobenzene	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
1,3-Dichlorobenzene	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
1,4-Dichlorobenzene	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Diethyl phthalate	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Dimethyl phthalate	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2,4-Dichlorophenol	ND	29	100		µg/L	1	3/6/2019 2:24:33 PM	43384
2,4-Dimethylphenol	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	3/6/2019 2:24:33 PM	43384
2,4-Dinitrophenol	ND	19	100		µg/L	1	3/6/2019 2:24:33 PM	43384
2,4-Dinitrotoluene	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2,6-Dinitrotoluene	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Fluoranthene	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Fluorene	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Hexachlorobenzene	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Hexachlorobutadiene	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Hexachloroethane	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Isophorone	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
1-Methylnaphthalene	ND	35	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2-Methylnaphthalene	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2-Methylphenol	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
3+4-Methylphenol	670	27	50		µg/L	1	3/6/2019 2:24:33 PM	43384
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	3/6/2019 2:24:33 PM	43384
N-Nitrosodimethylamine	ND	34	50		µg/L	1	3/6/2019 2:24:33 PM	43384
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Naphthalene	ND	25	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2-Nitroaniline	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:40:00 PM
Lab ID: 1902922-007
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	34	50		µg/L	1	3/6/2019 2:24:33 PM	43384
4-Nitroaniline	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Nitrobenzene	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2-Nitrophenol	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
4-Nitrophenol	ND	28	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Pentachlorophenol	ND	26	100		µg/L	1	3/6/2019 2:24:33 PM	43384
Phenanthrene	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Phenol	ND	30	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Pyrene	ND	33	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Pyridine	ND	27	50		µg/L	1	3/6/2019 2:24:33 PM	43384
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	3/6/2019 2:24:33 PM	43384
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	3/6/2019 2:24:33 PM	43384
Surr: 2-Fluorophenol	27.8	0	15-101		%Rec	1	3/6/2019 2:24:33 PM	43384
Surr: Phenol-d5	20.2	0	15-84.6		%Rec	1	3/6/2019 2:24:33 PM	43384
Surr: 2,4,6-Tribromophenol	48.6	0	27.8-112		%Rec	1	3/6/2019 2:24:33 PM	43384
Surr: Nitrobenzene-d5	60.7	0	33-113		%Rec	1	3/6/2019 2:24:33 PM	43384
Surr: 2-Fluorobiphenyl	46.7	0	26.6-107		%Rec	1	3/6/2019 2:24:33 PM	43384
Surr: 4-Terphenyl-d14	44.7	0	18.7-148		%Rec	1	3/6/2019 2:24:33 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2100	17	100		µg/L	100	2/22/2019 6:42:00 PM	R57879
Toluene	2.1	1.7	10	J	µg/L	10	2/22/2019 7:05:00 PM	R57879
Ethylbenzene	230	2.2	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Methyl tert-butyl ether (MTBE)	220	4.6	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2,4-Trimethylbenzene	160	2.5	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,3,5-Trimethylbenzene	31	2.3	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Naphthalene	24	2.9	20		µg/L	10	2/22/2019 7:05:00 PM	R57879
1-Methylnaphthalene	4.5	3.4	40	J	µg/L	10	2/22/2019 7:05:00 PM	R57879
2-Methylnaphthalene	4.4	3.5	40	J	µg/L	10	2/22/2019 7:05:00 PM	R57879
Acetone	ND	7.6	100		µg/L	10	2/22/2019 7:05:00 PM	R57879
Bromobenzene	ND	3.2	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Bromodichloromethane	ND	2.8	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Bromoform	ND	3.2	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Bromomethane	ND	2.7	30		µg/L	10	2/22/2019 7:05:00 PM	R57879
2-Butanone	ND	14	100		µg/L	10	2/22/2019 7:05:00 PM	R57879
Carbon disulfide	ND	3.9	100		µg/L	10	2/22/2019 7:05:00 PM	R57879
Carbon Tetrachloride	ND	1.4	10		µg/L	10	2/22/2019 7:05:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:40:00 PM
Lab ID: 1902922-007
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	2.9	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Chloroethane	ND	1.6	20		µg/L	10	2/22/2019 7:05:00 PM	R57879
Chloroform	ND	2.4	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Chloromethane	ND	3.2	30		µg/L	10	2/22/2019 7:05:00 PM	R57879
2-Chlorotoluene	ND	2.5	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
4-Chlorotoluene	ND	2.8	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
cis-1,2-DCE	ND	3.8	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	2/22/2019 7:05:00 PM	R57879
Dibromochloromethane	ND	2.4	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Dibromomethane	ND	3.2	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,1-Dichloroethane	ND	1.8	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,1-Dichloroethene	ND	1.2	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2-Dichloropropane	ND	1.7	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,3-Dichloropropane	ND	2.7	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
2,2-Dichloropropane	ND	2.3	20		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,1-Dichloropropene	ND	1.6	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Hexachlorobutadiene	ND	3.9	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
2-Hexanone	ND	9.1	100		µg/L	10	2/22/2019 7:05:00 PM	R57879
Isopropylbenzene	6.3	2.2	10	J	µg/L	10	2/22/2019 7:05:00 PM	R57879
4-Isopropyltoluene	ND	2.4	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
4-Methyl-2-pentanone	40	4.5	100	J	µg/L	10	2/22/2019 7:05:00 PM	R57879
Methylene Chloride	ND	2.1	30		µg/L	10	2/22/2019 7:05:00 PM	R57879
n-Butylbenzene	ND	2.5	30		µg/L	10	2/22/2019 7:05:00 PM	R57879
n-Propylbenzene	13	2.4	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
sec-Butylbenzene	ND	2.0	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Styrene	ND	2.5	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
tert-Butylbenzene	ND	2.2	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	2/22/2019 7:05:00 PM	R57879
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
trans-1,2-DCE	ND	1.8	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	2/22/2019 7:05:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:40:00 PM
Lab ID: 1902922-007
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	1.6	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Trichloroethene (TCE)	ND	2.6	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Trichlorofluoromethane	ND	1.4	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	2/22/2019 7:05:00 PM	R57879
Vinyl chloride	ND	1.2	10		µg/L	10	2/22/2019 7:05:00 PM	R57879
Xylenes, Total	140	6.4	15		µg/L	10	2/22/2019 7:05:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	10	2/22/2019 7:05:00 PM	R57879
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	10	2/22/2019 7:05:00 PM	R57879
Surr: Dibromofluoromethane	104	0	70-130		%Rec	10	2/22/2019 7:05:00 PM	R57879
Surr: Toluene-d8	99.2	0	70-130		%Rec	10	2/22/2019 7:05:00 PM	R57879

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:10:00 PM
Lab ID: 1902922-008
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.2	0.35	1.0		mg/L	1	2/26/2019 4:33:26 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 4:33:26 AM	43296
Surr: DNOP	101	0	70-130		%Rec	1	2/26/2019 4:33:26 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	48	1.1	2.5		mg/L	50	2/22/2019 3:59:34 PM	G57873
Surr: BFB	96.3	0	72.8-125		%Rec	50	2/22/2019 3:59:34 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.3	0.25	0.50		mg/L	5	2/21/2019 4:44:31 PM	R57874
Chloride	590	25	25		mg/L	50	3/7/2019 12:59:19 AM	A58183
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 4:44:31 PM	R57874
Bromide	1.9	0.068	0.50		mg/L	5	2/21/2019 4:44:31 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 4:44:31 PM	R57874
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/21/2019 4:44:31 PM	R57874
Sulfate	0.41	0.32	2.5	J	mg/L	5	2/21/2019 4:44:31 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	2.1	0.0032	0.010	*	mg/L	5	2/26/2019 10:38:24 AM	A57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 10:36:23 AM	A57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 10:36:23 AM	A57957
Calcium	78	0.062	1.0		mg/L	1	2/26/2019 10:36:23 AM	A57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 10:36:23 AM	A57957
Copper	0.0015	0.0013	0.0060	J	mg/L	1	2/26/2019 10:36:23 AM	A57957
Iron	2.0	0.044	0.10	*	mg/L	5	2/26/2019 10:38:24 AM	A57957
Magnesium	19	0.050	1.0		mg/L	1	2/26/2019 10:36:23 AM	A57957
Manganese	1.7	0.0014	0.010	*	mg/L	5	2/26/2019 10:38:24 AM	A57957
Potassium	1.4	0.16	1.0		mg/L	1	2/26/2019 10:36:23 AM	A57957
Silver	0.0012	0.00094	0.0050	J	mg/L	1	2/26/2019 10:36:23 AM	A57957
Sodium	640	4.2	10		mg/L	10	2/28/2019 8:08:08 PM	C58024
Zinc	0.024	0.0023	0.010		mg/L	1	2/26/2019 12:45:16 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	2.4	0.0032	0.010	*	mg/L	5	2/28/2019 9:40:53 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 9:38:54 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 9:38:54 PM	43379
Chromium	0.0016	0.0015	0.0060	J	mg/L	1	2/28/2019 9:38:54 PM	43379
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 9:38:54 PM	43379
Iron	5.8	0.087	0.20	*	mg/L	10	3/4/2019 4:42:15 PM	43379
Manganese	1.7	0.0014	0.010	*	mg/L	5	2/28/2019 9:40:53 PM	43379
Silver	0.0016	0.0014	0.0050	J	mg/L	1	2/28/2019 9:38:54 PM	43379

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:10:00 PM
Lab ID: 1902922-008
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.027	0.0058	0.010		mg/L	1	3/4/2019 4:40:12 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00026	0.00020	0.0010	J	mg/L	1	2/25/2019 5:57:56 PM	B57938
Arsenic	0.011	0.000068	0.0010	*	mg/L	1	2/25/2019 5:57:56 PM	B57938
Lead	0.00023	0.000047	0.00050	J	mg/L	1	2/25/2019 5:57:56 PM	B57938
Selenium	0.00038	0.00020	0.0010	J	mg/L	1	2/25/2019 5:57:56 PM	B57938
Thallium	ND	0.000032	0.00050		mg/L	1	2/25/2019 5:57:56 PM	B57938
Uranium	0.0016	0.000030	0.00050		mg/L	1	2/25/2019 5:57:56 PM	B57938
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00041	0.00039	0.0010	J	mg/L	1	3/1/2019 2:23:27 PM	43379
Arsenic	0.014	0.00031	0.0010	*	mg/L	1	3/1/2019 4:09:44 PM	43379
Lead	0.0050	0.000055	0.00050		mg/L	1	3/1/2019 2:23:27 PM	43379
Selenium	ND	0.00048	0.0010		mg/L	1	3/1/2019 4:09:44 PM	43379
Thallium	ND	0.000052	0.00050		mg/L	1	3/1/2019 2:23:27 PM	43379
Uranium	0.0023	0.000085	0.00050		mg/L	1	3/1/2019 2:23:27 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	3/7/2019 4:22:15 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Benzoic acid	20	6.3	20		µg/L	1	3/6/2019 2:54:19 PM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 2:54:19 PM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:10:00 PM
Lab ID: 1902922-008
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 2:54:19 PM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 2:54:19 PM	43384
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 2:54:19 PM	43384
2,4-Dimethylphenol	12	5.9	10		µg/L	1	3/6/2019 2:54:19 PM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 2:54:19 PM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 2:54:19 PM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 2:54:19 PM	43384
1-Methylnaphthalene	28	7.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2-Methylnaphthalene	25	6.3	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2-Methylphenol	9.4	6.3	10	J	µg/L	1	3/6/2019 2:54:19 PM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 2:54:19 PM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 2:54:19 PM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 2:54:19 PM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Naphthalene	100	5.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 2:54:19 PM	43384

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:10:00 PM
Lab ID: 1902922-008 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 2:54:19 PM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Phenol	64	6.0	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 2:54:19 PM	43384
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 2:54:19 PM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 2:54:19 PM	43384
Surr: 2-Fluorophenol	52.4	0	15-101		%Rec	1	3/6/2019 2:54:19 PM	43384
Surr: Phenol-d5	36.2	0	15-84.6		%Rec	1	3/6/2019 2:54:19 PM	43384
Surr: 2,4,6-Tribromophenol	72.6	0	27.8-112		%Rec	1	3/6/2019 2:54:19 PM	43384
Surr: Nitrobenzene-d5	76.8	0	33-113		%Rec	1	3/6/2019 2:54:19 PM	43384
Surr: 2-Fluorobiphenyl	72.0	0	26.6-107		%Rec	1	3/6/2019 2:54:19 PM	43384
Surr: 4-Terphenyl-d14	86.5	0	18.7-148		%Rec	1	3/6/2019 2:54:19 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	21000	170	1000		µg/L	1E+	2/22/2019 7:29:00 PM	R57879
Toluene	190	17	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Ethylbenzene	1400	22	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Methyl tert-butyl ether (MTBE)	610	46	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2,4-Trimethylbenzene	540	25	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,3,5-Trimethylbenzene	75	23	100	J	µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	23	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Naphthalene	120	29	200	J	µg/L	100	2/22/2019 7:53:00 PM	R57879
1-Methylnaphthalene	ND	34	400		µg/L	100	2/22/2019 7:53:00 PM	R57879
2-Methylnaphthalene	ND	35	400		µg/L	100	2/22/2019 7:53:00 PM	R57879
Acetone	ND	76	1000		µg/L	100	2/22/2019 7:53:00 PM	R57879
Bromobenzene	ND	32	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Bromodichloromethane	ND	28	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Bromoform	ND	32	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Bromomethane	ND	27	300		µg/L	100	2/22/2019 7:53:00 PM	R57879
2-Butanone	ND	140	1000		µg/L	100	2/22/2019 7:53:00 PM	R57879
Carbon disulfide	ND	39	1000		µg/L	100	2/22/2019 7:53:00 PM	R57879
Carbon Tetrachloride	ND	14	100		µg/L	100	2/22/2019 7:53:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:10:00 PM
Lab ID: 1902922-008
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	29	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Chloroethane	ND	16	200		µg/L	100	2/22/2019 7:53:00 PM	R57879
Chloroform	ND	24	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Chloromethane	ND	32	300		µg/L	100	2/22/2019 7:53:00 PM	R57879
2-Chlorotoluene	ND	25	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
4-Chlorotoluene	ND	28	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
cis-1,2-DCE	ND	38	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
cis-1,3-Dichloropropene	ND	30	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	47	200		µg/L	100	2/22/2019 7:53:00 PM	R57879
Dibromochloromethane	ND	24	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Dibromomethane	ND	32	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2-Dichlorobenzene	ND	31	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,3-Dichlorobenzene	ND	31	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,4-Dichlorobenzene	ND	29	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Dichlorodifluoromethane	ND	26	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,1-Dichloroethane	53	18	100	J	µg/L	100	2/22/2019 7:53:00 PM	R57879
1,1-Dichloroethene	ND	12	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2-Dichloropropane	ND	17	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,3-Dichloropropane	ND	27	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
2,2-Dichloropropane	ND	23	200		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,1-Dichloropropene	ND	16	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Hexachlorobutadiene	ND	39	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
2-Hexanone	ND	91	1000		µg/L	100	2/22/2019 7:53:00 PM	R57879
Isopropylbenzene	29	22	100	J	µg/L	100	2/22/2019 7:53:00 PM	R57879
4-Isopropyltoluene	ND	24	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
4-Methyl-2-pentanone	ND	45	1000		µg/L	100	2/22/2019 7:53:00 PM	R57879
Methylene Chloride	ND	21	300		µg/L	100	2/22/2019 7:53:00 PM	R57879
n-Butylbenzene	ND	25	300		µg/L	100	2/22/2019 7:53:00 PM	R57879
n-Propylbenzene	75	24	100	J	µg/L	100	2/22/2019 7:53:00 PM	R57879
sec-Butylbenzene	ND	20	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Styrene	ND	25	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
tert-Butylbenzene	ND	22	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	25	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	33	200		µg/L	100	2/22/2019 7:53:00 PM	R57879
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
trans-1,2-DCE	ND	18	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
trans-1,3-Dichloropropene	ND	28	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2,3-Trichlorobenzene	ND	28	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2,4-Trichlorobenzene	ND	27	100		µg/L	100	2/22/2019 7:53:00 PM	R57879

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 4:10:00 PM
Lab ID: 1902922-008
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	16	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,1,2-Trichloroethane	ND	23	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Trichloroethene (TCE)	ND	26	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Trichlorofluoromethane	ND	14	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
1,2,3-Trichloropropane	ND	57	200		µg/L	100	2/22/2019 7:53:00 PM	R57879
Vinyl chloride	ND	12	100		µg/L	100	2/22/2019 7:53:00 PM	R57879
Xylenes, Total	1600	64	150		µg/L	100	2/22/2019 7:53:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	100	2/22/2019 7:53:00 PM	R57879
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	100	2/22/2019 7:53:00 PM	R57879
Surr: Dibromofluoromethane	104	0	70-130		%Rec	100	2/22/2019 7:53:00 PM	R57879
Surr: Toluene-d8	100	0	70-130		%Rec	100	2/22/2019 7:53:00 PM	R57879

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:40:00 PM
Lab ID: 1902922-009
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 5:10:16 PM	R57874
Chloride	8.0	2.5	2.5		mg/L	5	2/21/2019 5:10:16 PM	R57874
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 5:10:16 PM	R57874
Bromide	0.078	0.068	0.50	J	mg/L	5	2/21/2019 5:10:16 PM	R57874
Nitrogen, Nitrate (As N)	0.15	0.14	0.50	J	mg/L	5	2/21/2019 5:10:16 PM	R57874
Phosphorus, Orthophosphate (As P)	0.25	0.13	2.5	J	mg/L	5	2/21/2019 5:10:16 PM	R57874
Sulfate	410	1.3	10		mg/L	20	2/21/2019 5:23:08 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.013	0.00065	0.0020		mg/L	1	2/26/2019 10:40:30 AM	A57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 10:40:30 AM	A57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 10:40:30 AM	A57957
Calcium	190	0.31	5.0		mg/L	5	2/26/2019 10:42:50 AM	A57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 10:40:30 AM	A57957
Copper	ND	0.0013	0.0060		mg/L	1	2/26/2019 10:40:30 AM	A57957
Iron	0.031	0.0087	0.020		mg/L	1	2/26/2019 10:40:30 AM	A57957
Magnesium	38	0.050	1.0		mg/L	1	2/26/2019 10:40:30 AM	A57957
Manganese	0.00034	0.00029	0.0020	J	mg/L	1	2/26/2019 10:40:30 AM	A57957
Potassium	1.1	0.16	1.0		mg/L	1	2/26/2019 10:40:30 AM	A57957
Silver	0.0033	0.00094	0.0050	J	mg/L	1	2/26/2019 10:40:30 AM	A57957
Sodium	16	0.42	1.0		mg/L	1	2/26/2019 10:40:30 AM	A57957
Zinc	0.047	0.0023	0.010		mg/L	1	2/26/2019 12:57:58 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.014	0.00065	0.0020		mg/L	1	2/28/2019 9:42:46 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 9:42:46 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 9:42:46 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 9:42:46 PM	43379
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 9:42:46 PM	43379
Iron	0.18	0.0087	0.020		mg/L	1	2/28/2019 9:42:46 PM	43379
Manganese	0.00072	0.00029	0.0020	J	mg/L	1	2/28/2019 9:42:46 PM	43379
Silver	0.0040	0.0014	0.0050	J	mg/L	1	2/28/2019 9:42:46 PM	43379
Zinc	ND	0.0058	0.010		mg/L	1	3/4/2019 4:44:33 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/25/2019 6:00:21 PM	B57938
Arsenic	0.0031	0.000068	0.0010		mg/L	1	2/25/2019 6:00:21 PM	B57938
Lead	ND	0.000047	0.00050		mg/L	1	2/25/2019 6:00:21 PM	B57938
Selenium	0.00096	0.00020	0.0010	J	mg/L	1	2/25/2019 6:00:21 PM	B57938
Thallium	ND	0.000032	0.00050		mg/L	1	2/25/2019 6:00:21 PM	B57938
Uranium	0.0015	0.000030	0.00050		mg/L	1	2/25/2019 6:00:21 PM	B57938

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:40:00 PM
Lab ID: 1902922-009
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/1/2019 2:25:24 PM	43379
Arsenic	0.0039	0.00031	0.0010		mg/L	1	3/1/2019 4:11:40 PM	43379
Lead	ND	0.000055	0.00050		mg/L	1	3/1/2019 2:25:24 PM	43379
Selenium	0.0010	0.00048	0.0010	J	mg/L	1	3/1/2019 4:11:40 PM	43379
Thallium	ND	0.000052	0.00050		mg/L	1	3/1/2019 2:25:24 PM	43379
Uranium	0.0013	0.000085	0.00050		mg/L	1	3/1/2019 2:25:24 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	3/7/2019 4:29:08 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Benzoic acid	7.5	6.3	20	J	µg/L	1	3/6/2019 3:23:52 PM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 3:23:52 PM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 3:23:52 PM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 3:23:52 PM	43384

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:40:00 PM
Lab ID: 1902922-009
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 3:23:52 PM	43384
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/6/2019 3:23:52 PM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 3:23:52 PM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 3:23:52 PM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 3:23:52 PM	43384
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2-Methylphenol	ND	6.3	10		µg/L	1	3/6/2019 3:23:52 PM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 3:23:52 PM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 3:23:52 PM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 3:23:52 PM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Naphthalene	ND	5.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 3:23:52 PM	43384
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 3:23:52 PM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Phenol	ND	6.0	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 3:23:52 PM	43384

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:40:00 PM
Lab ID: 1902922-009
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 3:23:52 PM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 3:23:52 PM	43384
Surr: 2-Fluorophenol	52.2	0	15-101		%Rec	1	3/6/2019 3:23:52 PM	43384
Surr: Phenol-d5	36.4	0	15-84.6		%Rec	1	3/6/2019 3:23:52 PM	43384
Surr: 2,4,6-Tribromophenol	72.0	0	27.8-112		%Rec	1	3/6/2019 3:23:52 PM	43384
Surr: Nitrobenzene-d5	73.3	0	33-113		%Rec	1	3/6/2019 3:23:52 PM	43384
Surr: 2-Fluorobiphenyl	68.3	0	26.6-107		%Rec	1	3/6/2019 3:23:52 PM	43384
Surr: 4-Terphenyl-d14	58.3	0	18.7-148		%Rec	1	3/6/2019 3:23:52 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Toluene	ND	0.17	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Naphthalene	ND	0.29	2.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Acetone	ND	0.76	10		µg/L	1	2/22/2019 8:40:00 PM	R57879
Bromobenzene	ND	0.32	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Bromoform	ND	0.32	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Bromomethane	ND	0.27	3.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
2-Butanone	ND	1.4	10		µg/L	1	2/22/2019 8:40:00 PM	R57879
Carbon disulfide	ND	0.39	10		µg/L	1	2/22/2019 8:40:00 PM	R57879
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Chloroethane	ND	0.16	2.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Chloroform	ND	0.24	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Chloromethane	ND	0.32	3.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:40:00 PM
Lab ID: 1902922-009
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.32	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
2-Hexanone	ND	0.91	10		µg/L	1	2/22/2019 8:40:00 PM	R57879
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/22/2019 8:40:00 PM	R57879
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Styrene	ND	0.25	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/22/2019 8:40:00 PM	R57879
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/22/2019 8:40:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	1	2/22/2019 8:40:00 PM	R57879
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	2/22/2019 8:40:00 PM	R57879
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	2/22/2019 8:40:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:40:00 PM
Lab ID: 1902922-009
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	99.7	0	70-130		%Rec	1	2/22/2019 8:40:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:55:00 PM
Lab ID: 1902922-010
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.0062	0.0033	0.0093	J	µg/L	1	3/1/2019 12:58:29 PM	43398
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/26/2019 4:55:33 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 4:55:33 AM	43296
Surr: DNOP	107	0	70-130		%Rec	1	2/26/2019 4:55:33 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.14	0.021	0.050		mg/L	1	2/22/2019 4:22:28 PM	G57873
Surr: BFB	107	0	72.8-125		%Rec	1	2/22/2019 4:22:28 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 5:35:59 PM	R57874
Chloride	760	25	25		mg/L	50	3/7/2019 1:12:11 AM	A58183
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 5:35:59 PM	R57874
Bromide	1.3	0.068	0.50		mg/L	5	2/21/2019 5:35:59 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 5:35:59 PM	R57874
Phosphorus, Orthophosphate (As P)	1.3	0.13	2.5	J	mg/L	5	2/21/2019 5:35:59 PM	R57874
Sulfate	65	0.32	2.5		mg/L	5	2/21/2019 5:35:59 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.14	0.00065	0.0020		mg/L	1	2/26/2019 1:00:20 PM	C57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 1:00:20 PM	C57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 1:00:20 PM	C57957
Calcium	140	0.31	5.0		mg/L	5	2/26/2019 1:02:29 PM	C57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 1:00:20 PM	C57957
Copper	0.0075	0.0013	0.0060		mg/L	1	2/26/2019 1:00:20 PM	C57957
Iron	ND	0.0087	0.020		mg/L	1	2/26/2019 1:00:20 PM	C57957
Magnesium	28	0.050	1.0		mg/L	1	2/26/2019 1:00:20 PM	C57957
Manganese	0.017	0.00029	0.0020		mg/L	1	2/26/2019 1:00:20 PM	C57957
Potassium	1.1	0.16	1.0		mg/L	1	2/26/2019 1:00:20 PM	C57957
Silver	0.0031	0.00094	0.0050	J	mg/L	1	2/26/2019 1:00:20 PM	C57957
Sodium	500	4.2	10		mg/L	10	2/28/2019 8:10:25 PM	C58024
Zinc	0.019	0.0023	0.010		mg/L	1	2/26/2019 1:00:20 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.17	0.00065	0.0020		mg/L	1	2/28/2019 9:47:20 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 9:47:20 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 9:47:20 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 9:47:20 PM	43379
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 9:47:20 PM	43379
Iron	1.7	0.044	0.10	*	mg/L	5	2/28/2019 9:49:22 PM	43379

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-31
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:55:00 PM
Lab ID: 1902922-010
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Manganese	0.060	0.00029	0.0020	*	mg/L	1	2/28/2019 9:47:20 PM	43379
Silver	0.0033	0.0014	0.0050	J	mg/L	1	2/28/2019 9:47:20 PM	43379
Zinc	ND	0.0058	0.010		mg/L	1	3/4/2019 4:46:55 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/25/2019 6:07:38 PM	B57938
Arsenic	0.00059	0.000068	0.0010	J	mg/L	1	2/25/2019 6:07:38 PM	B57938
Lead	0.000076	0.000047	0.00050	J	mg/L	1	2/25/2019 6:07:38 PM	B57938
Selenium	ND	0.00020	0.0010		mg/L	1	2/25/2019 6:07:38 PM	B57938
Thallium	ND	0.000032	0.00050		mg/L	1	2/25/2019 6:07:38 PM	B57938
Uranium	0.041	0.00037	0.0025	*	mg/L	5	2/27/2019 7:53:30 PM	B58014
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/1/2019 2:27:21 PM	43379
Arsenic	ND	0.0016	0.0050		mg/L	5	3/1/2019 4:17:33 PM	43379
Lead	0.0016	0.000055	0.00050		mg/L	1	3/1/2019 2:27:21 PM	43379
Selenium	ND	0.0024	0.0050		mg/L	5	3/1/2019 4:17:33 PM	43379
Thallium	ND	0.000052	0.00050		mg/L	1	3/1/2019 2:27:21 PM	43379
Uranium	0.039	0.00042	0.0025	*	mg/L	5	3/1/2019 4:17:33 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000054	0.000038	0.00020	J	mg/L	1	3/7/2019 4:31:25 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Benzoic acid	11	6.3	20	J	µg/L	1	3/6/2019 3:53:37 PM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 3:53:37 PM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 3:53:37 PM	43384

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:55:00 PM
Lab ID: 1902922-010
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 3:53:37 PM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 3:53:37 PM	43384
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 3:53:37 PM	43384
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/6/2019 3:53:37 PM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 3:53:37 PM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 3:53:37 PM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 3:53:37 PM	43384
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2-Methylphenol	ND	6.3	10		µg/L	1	3/6/2019 3:53:37 PM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 3:53:37 PM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 3:53:37 PM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 3:53:37 PM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 3:53:37 PM	43384

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:55:00 PM
Lab ID: 1902922-010
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Naphthalene	ND	5.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 3:53:37 PM	43384
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 3:53:37 PM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Phenol	ND	6.0	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 3:53:37 PM	43384
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 3:53:37 PM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 3:53:37 PM	43384
Surr: 2-Fluorophenol	43.5	0	15-101		%Rec	1	3/6/2019 3:53:37 PM	43384
Surr: Phenol-d5	36.2	0	15-84.6		%Rec	1	3/6/2019 3:53:37 PM	43384
Surr: 2,4,6-Tribromophenol	70.4	0	27.8-112		%Rec	1	3/6/2019 3:53:37 PM	43384
Surr: Nitrobenzene-d5	57.0	0	33-113		%Rec	1	3/6/2019 3:53:37 PM	43384
Surr: 2-Fluorobiphenyl	56.7	0	26.6-107		%Rec	1	3/6/2019 3:53:37 PM	43384
Surr: 4-Terphenyl-d14	57.5	0	18.7-148		%Rec	1	3/6/2019 3:53:37 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1.0	0.17	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Toluene	ND	0.17	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Methyl tert-butyl ether (MTBE)	120	0.46	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2-Dichloroethane (EDC)	30	0.19	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Naphthalene	ND	0.29	2.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Acetone	ND	0.76	10		µg/L	1	2/22/2019 9:03:00 PM	R57879
Bromobenzene	ND	0.32	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Bromoform	ND	0.32	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Bromomethane	ND	0.27	3.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
2-Butanone	ND	1.4	10		µg/L	1	2/22/2019 9:03:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-31
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:55:00 PM
Lab ID: 1902922-010
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Carbon disulfide	ND	0.39	10		µg/L	1	2/22/2019 9:03:00 PM	R57879
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Chloroethane	ND	0.16	2.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Chloroform	0.65	0.24	1.0	J	µg/L	1	2/22/2019 9:03:00 PM	R57879
Chloromethane	ND	0.32	3.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
cis-1,2-DCE	1.9	0.38	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Dibromomethane	ND	0.32	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,1-Dichloroethane	52	0.18	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,1-Dichloroethene	95	0.12	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
2-Hexanone	ND	0.91	10		µg/L	1	2/22/2019 9:03:00 PM	R57879
Isopropylbenzene	1.5	0.22	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/22/2019 9:03:00 PM	R57879
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
n-Butylbenzene	0.44	0.25	3.0	J	µg/L	1	2/22/2019 9:03:00 PM	R57879
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
sec-Butylbenzene	0.54	0.20	1.0	J	µg/L	1	2/22/2019 9:03:00 PM	R57879
Styrene	ND	0.25	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-31
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 1:55:00 PM
Lab ID: 1902922-010
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,1,1-Trichloroethane	5.5	0.16	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,1,2-Trichloroethane	2.8	0.23	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Trichloroethene (TCE)	6.1	0.26	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/22/2019 9:03:00 PM	R57879
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/22/2019 9:03:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	1	2/22/2019 9:03:00 PM	R57879
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	2/22/2019 9:03:00 PM	R57879
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	2/22/2019 9:03:00 PM	R57879
Surr: Toluene-d8	97.8	0	70-130		%Rec	1	2/22/2019 9:03:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 2:36:00 PM
Lab ID: 1902922-011
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.0039	0.0033	0.0094	J	µg/L	1	3/1/2019 1:13:29 PM	43398
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/26/2019 5:17:36 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 5:17:36 AM	43296
Surr: DNOP	105	0	70-130		%Rec	1	2/26/2019 5:17:36 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.14	0.021	0.050		mg/L	1	2/22/2019 4:45:19 PM	G57873
Surr: BFB	106	0	72.8-125		%Rec	1	2/22/2019 4:45:19 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 6:27:26 PM	R57874
Chloride	770	25	25		mg/L	50	3/7/2019 1:25:02 AM	A58183
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	2/21/2019 6:27:26 PM	R57874
Bromide	1.3	0.068	0.50		mg/L	5	2/21/2019 6:27:26 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 6:27:26 PM	R57874
Phosphorus, Orthophosphate (As P)	1.2	0.13	2.5	J	mg/L	5	2/21/2019 6:27:26 PM	R57874
Sulfate	67	0.32	2.5		mg/L	5	2/21/2019 6:27:26 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.14	0.00065	0.0020		mg/L	1	2/26/2019 1:04:38 PM	C57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 1:04:38 PM	C57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 1:04:38 PM	C57957
Calcium	130	0.31	5.0		mg/L	5	2/26/2019 1:06:46 PM	C57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 1:04:38 PM	C57957
Copper	0.0032	0.0013	0.0060	J	mg/L	1	2/26/2019 1:04:38 PM	C57957
Iron	0.012	0.0087	0.020	J	mg/L	1	2/26/2019 1:04:38 PM	C57957
Magnesium	28	0.050	1.0		mg/L	1	2/26/2019 1:04:38 PM	C57957
Manganese	0.017	0.00029	0.0020		mg/L	1	2/26/2019 1:04:38 PM	C57957
Potassium	1.1	0.16	1.0		mg/L	1	2/26/2019 1:04:38 PM	C57957
Silver	0.0029	0.00094	0.0050	J	mg/L	1	2/26/2019 1:04:38 PM	C57957
Sodium	510	4.2	10		mg/L	10	2/28/2019 8:12:40 PM	C58024
Zinc	0.017	0.0023	0.010		mg/L	1	2/26/2019 1:04:38 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.16	0.00065	0.0020		mg/L	1	2/28/2019 10:00:12 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 10:00:12 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 10:00:12 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 10:00:12 PM	43379
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 10:00:12 PM	43379
Iron	1.3	0.044	0.10	*	mg/L	5	2/28/2019 10:02:14 PM	43379

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 2:36:00 PM
Lab ID: 1902922-011
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Manganese	0.043	0.00029	0.0020		mg/L	1	2/28/2019 10:00:12 PM	43379
Silver	0.0034	0.0014	0.0050	J	mg/L	1	2/28/2019 10:00:12 PM	43379
Zinc	0.0073	0.0058	0.010	J	mg/L	1	3/4/2019 4:48:57 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00020	0.0010		mg/L	1	2/25/2019 6:10:03 PM	B57938
Arsenic	0.00060	0.000068	0.0010	J	mg/L	1	2/25/2019 6:10:03 PM	B57938
Lead	0.00010	0.000047	0.00050	J	mg/L	1	2/25/2019 6:10:03 PM	B57938
Selenium	ND	0.00020	0.0010		mg/L	1	2/25/2019 6:10:03 PM	B57938
Thallium	ND	0.000032	0.00050		mg/L	1	2/25/2019 6:10:03 PM	B57938
Uranium	0.040	0.00037	0.0025	*	mg/L	5	2/27/2019 7:55:55 PM	B58014
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/1/2019 2:29:18 PM	43379
Arsenic	ND	0.0016	0.0050		mg/L	5	3/1/2019 4:19:30 PM	43379
Lead	0.0013	0.000055	0.00050		mg/L	1	3/1/2019 2:29:18 PM	43379
Selenium	ND	0.0024	0.0050		mg/L	5	3/1/2019 4:19:30 PM	43379
Thallium	ND	0.000052	0.00050		mg/L	1	3/1/2019 2:29:18 PM	43379
Uranium	0.038	0.00042	0.0025	*	mg/L	5	3/1/2019 4:19:30 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	3/7/2019 4:33:42 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Benzoic acid	7.1	6.3	20	J	µg/L	1	3/6/2019 4:23:06 PM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 4:23:06 PM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 4:23:06 PM	43384

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 4:23:06 PM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 4:23:06 PM	43384
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 4:23:06 PM	43384
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/6/2019 4:23:06 PM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 4:23:06 PM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 4:23:06 PM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 4:23:06 PM	43384
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2-Methylphenol	ND	6.3	10		µg/L	1	3/6/2019 4:23:06 PM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 4:23:06 PM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 4:23:06 PM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 4:23:06 PM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 4:23:06 PM	43384

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Lab ID: 1902922-011
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Naphthalene	ND	5.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 4:23:06 PM	43384
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 4:23:06 PM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Phenol	ND	6.0	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 4:23:06 PM	43384
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 4:23:06 PM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 4:23:06 PM	43384
Surr: 2-Fluorophenol	41.4	0	15-101		%Rec	1	3/6/2019 4:23:06 PM	43384
Surr: Phenol-d5	29.8	0	15-84.6		%Rec	1	3/6/2019 4:23:06 PM	43384
Surr: 2,4,6-Tribromophenol	55.2	0	27.8-112		%Rec	1	3/6/2019 4:23:06 PM	43384
Surr: Nitrobenzene-d5	56.8	0	33-113		%Rec	1	3/6/2019 4:23:06 PM	43384
Surr: 2-Fluorobiphenyl	53.0	0	26.6-107		%Rec	1	3/6/2019 4:23:06 PM	43384
Surr: 4-Terphenyl-d14	47.7	0	18.7-148		%Rec	1	3/6/2019 4:23:06 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1.1	0.17	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Toluene	ND	0.17	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Methyl tert-butyl ether (MTBE)	120	0.46	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2-Dichloroethane (EDC)	31	0.19	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Naphthalene	ND	0.29	2.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Acetone	ND	0.76	10		µg/L	1	2/22/2019 9:27:00 PM	R57879
Bromobenzene	ND	0.32	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Bromoform	ND	0.32	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Bromomethane	ND	0.27	3.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
2-Butanone	ND	1.4	10		µg/L	1	2/22/2019 9:27:00 PM	R57879

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Carbon disulfide	ND	0.39	10		µg/L	1	2/22/2019 9:27:00 PM	R57879
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Chloroethane	ND	0.16	2.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Chloroform	0.69	0.24	1.0	J	µg/L	1	2/22/2019 9:27:00 PM	R57879
Chloromethane	ND	0.32	3.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
cis-1,2-DCE	2.1	0.38	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Dibromomethane	ND	0.32	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,1-Dichloroethane	53	0.18	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,1-Dichloroethene	95	0.12	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
2-Hexanone	ND	0.91	10		µg/L	1	2/22/2019 9:27:00 PM	R57879
Isopropylbenzene	1.4	0.22	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/22/2019 9:27:00 PM	R57879
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
n-Butylbenzene	0.42	0.25	3.0	J	µg/L	1	2/22/2019 9:27:00 PM	R57879
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
sec-Butylbenzene	0.49	0.20	1.0	J	µg/L	1	2/22/2019 9:27:00 PM	R57879
Styrene	ND	0.25	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 2:36:00 PM
Lab ID: 1902922-011
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,1,1-Trichloroethane	5.4	0.16	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,1,2-Trichloroethane	2.9	0.23	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Trichloroethene (TCE)	6.3	0.26	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/22/2019 9:27:00 PM	R57879
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/22/2019 9:27:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	1	2/22/2019 9:27:00 PM	R57879
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	2/22/2019 9:27:00 PM	R57879
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	2/22/2019 9:27:00 PM	R57879
Surr: Toluene-d8	98.8	0	70-130		%Rec	1	2/22/2019 9:27:00 PM	R57879

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:30:00 PM
Lab ID: 1902922-012 **Matrix:** AQUEOUS **Received Date:** 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	3/1/2019 1:28:28 PM	43398
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	2/26/2019 5:39:30 AM	43296
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/26/2019 5:39:30 AM	43296
Surr: DNOP	102	0	70-130		%Rec	1	2/26/2019 5:39:30 AM	43296
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	2/22/2019 5:08:07 PM	G57873
Surr: BFB	89.5	0	72.8-125		%Rec	1	2/22/2019 5:08:07 PM	G57873
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	2/21/2019 6:53:11 PM	R57874
Chloride	3100	250	250		mg/L	500	3/7/2019 1:37:54 AM	A58183
Nitrogen, Nitrite (As N)	ND	1.4	2.0		mg/L	20	2/21/2019 7:06:02 PM	R57874
Bromide	0.91	0.068	0.50		mg/L	5	2/21/2019 6:53:11 PM	R57874
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	2/21/2019 6:53:11 PM	R57874
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	2/21/2019 6:53:11 PM	R57874
Sulfate	550	1.3	10		mg/L	20	2/21/2019 7:06:02 PM	R57874
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.052	0.00065	0.0020		mg/L	1	2/26/2019 1:08:55 PM	C57957
Beryllium	ND	0.00028	0.0020		mg/L	1	2/26/2019 1:08:55 PM	C57957
Cadmium	ND	0.00055	0.0020		mg/L	1	2/26/2019 1:08:55 PM	C57957
Calcium	270	0.31	5.0		mg/L	5	2/26/2019 1:11:16 PM	C57957
Chromium	ND	0.0015	0.0060		mg/L	1	2/26/2019 1:08:55 PM	C57957
Copper	0.0058	0.0013	0.0060	J	mg/L	1	2/26/2019 1:08:55 PM	C57957
Iron	0.035	0.0087	0.020		mg/L	1	2/26/2019 1:08:55 PM	C57957
Magnesium	51	0.050	1.0		mg/L	1	2/26/2019 1:08:55 PM	C57957
Manganese	0.0029	0.00029	0.0020		mg/L	1	2/26/2019 1:08:55 PM	C57957
Potassium	5.3	0.16	1.0		mg/L	1	2/26/2019 1:08:55 PM	C57957
Silver	0.0057	0.00094	0.0050		mg/L	1	2/26/2019 1:08:55 PM	C57957
Sodium	2100	21	50		mg/L	50	2/28/2019 8:14:55 PM	C58024
Zinc	0.027	0.0023	0.010		mg/L	1	2/26/2019 1:08:55 PM	C57957
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.11	0.00065	0.0020		mg/L	1	2/28/2019 10:04:34 PM	43379
Beryllium	ND	0.00028	0.0020		mg/L	1	2/28/2019 10:04:34 PM	43379
Cadmium	ND	0.00074	0.0020		mg/L	1	2/28/2019 10:04:34 PM	43379
Chromium	ND	0.0015	0.0060		mg/L	1	2/28/2019 10:04:34 PM	43379
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2019 10:04:34 PM	43379
Iron	2.7	0.044	0.10	*	mg/L	5	2/28/2019 10:06:36 PM	43379

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Client Sample ID: MKTF-40
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:30:00 PM
Lab ID: 1902922-012
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Manganese	0.053	0.00029	0.0020	*	mg/L	1	2/28/2019 10:04:34 PM	43379
Silver	0.0064	0.0014	0.0050		mg/L	1	3/4/2019 4:50:59 PM	43379
Zinc	0.010	0.0058	0.010		mg/L	1	3/4/2019 4:50:59 PM	43379
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0010	0.0050		mg/L	5	2/26/2019 7:56:03 PM	B57981
Arsenic	ND	0.0013	0.0050		mg/L	5	2/27/2019 7:58:20 PM	B58014
Lead	ND	0.00054	0.0025		mg/L	5	2/27/2019 7:58:20 PM	B58014
Selenium	ND	0.0028	0.0050		mg/L	5	2/27/2019 7:58:20 PM	B58014
Thallium	ND	0.00066	0.0025		mg/L	5	2/27/2019 7:58:20 PM	B58014
Uranium	0.042	0.00037	0.0025	*	mg/L	5	2/27/2019 7:58:20 PM	B58014
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/1/2019 2:31:15 PM	43379
Arsenic	0.0024	0.0016	0.0050	J	mg/L	5	3/1/2019 4:21:27 PM	43379
Lead	0.0028	0.000055	0.00050		mg/L	1	3/1/2019 2:31:15 PM	43379
Selenium	ND	0.0024	0.0050		mg/L	5	3/1/2019 4:21:27 PM	43379
Thallium	0.000072	0.000052	0.00050	J	mg/L	1	3/1/2019 2:31:15 PM	43379
Uranium	0.042	0.00042	0.0025	*	mg/L	5	3/1/2019 4:21:27 PM	43379
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000056	0.000038	0.00020	J	mg/L	1	3/7/2019 4:35:59 PM	43557
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Acenaphthylene	ND	6.2	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Aniline	ND	6.2	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Anthracene	ND	5.7	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Azobenzene	ND	6.7	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Benz(a)anthracene	ND	5.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Benzo(a)pyrene	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Benzoic acid	8.2	6.3	20	J	µg/L	1	3/6/2019 4:52:44 PM	43384
Benzyl alcohol	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	3/6/2019 4:52:44 PM	43384
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	3/6/2019 4:52:44 PM	43384

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Client Sample ID: MKTF-40
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:30:00 PM
Lab ID: 1902922-012
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Carbazole	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	3/6/2019 4:52:44 PM	43384
4-Chloroaniline	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2-Chloronaphthalene	ND	6.1	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2-Chlorophenol	ND	5.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Chrysene	ND	6.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Dibenzofuran	ND	6.9	10		µg/L	1	3/6/2019 4:52:44 PM	43384
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Diethyl phthalate	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Dimethyl phthalate	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	3/6/2019 4:52:44 PM	43384
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	3/6/2019 4:52:44 PM	43384
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	3/6/2019 4:52:44 PM	43384
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	3/6/2019 4:52:44 PM	43384
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Fluoranthene	ND	5.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Fluorene	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Hexachlorobenzene	ND	6.2	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Hexachlorobutadiene	ND	6.4	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Hexachloroethane	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Isophorone	ND	6.2	10		µg/L	1	3/6/2019 4:52:44 PM	43384
1-Methylnaphthalene	ND	7.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2-Methylnaphthalene	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2-Methylphenol	ND	6.3	10		µg/L	1	3/6/2019 4:52:44 PM	43384
3+4-Methylphenol	ND	5.4	10		µg/L	1	3/6/2019 4:52:44 PM	43384
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	3/6/2019 4:52:44 PM	43384
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	3/6/2019 4:52:44 PM	43384
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	3/6/2019 4:52:44 PM	43384

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:30:00 PM
Lab ID: 1902922-012
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Naphthalene	ND	5.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2-Nitroaniline	ND	5.9	10		µg/L	1	3/6/2019 4:52:44 PM	43384
3-Nitroaniline	ND	6.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
4-Nitroaniline	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Nitrobenzene	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2-Nitrophenol	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
4-Nitrophenol	ND	5.6	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Pentachlorophenol	ND	5.3	20		µg/L	1	3/6/2019 4:52:44 PM	43384
Phenanthrene	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Phenol	ND	6.0	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Pyrene	ND	6.5	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Pyridine	ND	5.4	10		µg/L	1	3/6/2019 4:52:44 PM	43384
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	3/6/2019 4:52:44 PM	43384
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	3/6/2019 4:52:44 PM	43384
Surr: 2-Fluorophenol	49.2	0	15-101		%Rec	1	3/6/2019 4:52:44 PM	43384
Surr: Phenol-d5	36.6	0	15-84.6		%Rec	1	3/6/2019 4:52:44 PM	43384
Surr: 2,4,6-Tribromophenol	63.4	0	27.8-112		%Rec	1	3/6/2019 4:52:44 PM	43384
Surr: Nitrobenzene-d5	67.0	0	33-113		%Rec	1	3/6/2019 4:52:44 PM	43384
Surr: 2-Fluorobiphenyl	61.4	0	26.6-107		%Rec	1	3/6/2019 4:52:44 PM	43384
Surr: 4-Terphenyl-d14	53.4	0	18.7-148		%Rec	1	3/6/2019 4:52:44 PM	43384
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Toluene	ND	0.17	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Ethylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2-Dichloroethane (EDC)	0.28	0.19	1.0	J	µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Naphthalene	ND	0.29	2.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Acetone	ND	0.76	10		µg/L	1	2/22/2019 9:51:00 PM	R57879
Bromobenzene	ND	0.32	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Bromodichloromethane	ND	0.28	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Bromoform	ND	0.32	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Bromomethane	ND	0.27	3.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
2-Butanone	ND	1.4	10		µg/L	1	2/22/2019 9:51:00 PM	R57879

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Collection Date: 2/20/2019 3:30:00 PM
Lab ID: 1902922-012
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Carbon disulfide	ND	0.39	10		µg/L	1	2/22/2019 9:51:00 PM	R57879
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Chlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Chloroethane	ND	0.16	2.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Chloroform	ND	0.24	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Chloromethane	ND	0.32	3.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Dibromochloromethane	ND	0.24	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Dibromomethane	ND	0.32	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,1-Dichloroethane	1.0	0.18	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
2-Hexanone	ND	0.91	10		µg/L	1	2/22/2019 9:51:00 PM	R57879
Isopropylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	2/22/2019 9:51:00 PM	R57879
Methylene Chloride	ND	0.21	3.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
n-Butylbenzene	ND	0.25	3.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
n-Propylbenzene	ND	0.24	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Styrene	ND	0.25	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 2019 1st QTR GW Sampling
Collection Date: 2/20/2019 3:30:00 PM
Lab ID: 1902922-012
Matrix: AQUEOUS
Received Date: 2/21/2019 11:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Vinyl chloride	ND	0.12	1.0		µg/L	1	2/22/2019 9:51:00 PM	R57879
Xylenes, Total	ND	0.64	1.5		µg/L	1	2/22/2019 9:51:00 PM	R57879
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	1	2/22/2019 9:51:00 PM	R57879
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	2/22/2019 9:51:00 PM	R57879
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	2/22/2019 9:51:00 PM	R57879
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	2/22/2019 9:51:00 PM	R57879

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

Qualifiers:

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

1902922-005F PW-3

Collected date/time: 02/20/19 10:55

SAMPLE RESULTS - 01

L1072535

Wet Chemistry by Method 1500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	02/26/2019 15:43	WG1241499

1902922-009F PW-4

Collected date/time: 02/20/19 13:40

SAMPLE RESULTS - 02

L1072535

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	02/26/2019 15:46	WC124499

WG1241499

Wet Chemistry by Method 4500CN E-2011

QUALITY CONTROL SUMMARY

L1072535-01,02

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3387024-1 02/26/19 15:16

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00160	0.00500

Laboratory Control Sample (LCS)

(LCS) R3387024-2 02/26/19 15:17

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.106	106	85.0-115	

L1071729-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1071729-01 02/26/19 15:25 • (MS) R3387024-4 02/26/19 15:28 • (MSD) R3387024-5 02/26/19 15:29

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.105	0.0937	105	93.7	1	75.0-125			6.19	20

L1072535-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1072535-01 02/26/19 15:43 • (MS) R3387024-7 02/26/19 15:44 • (MSD) R3387024-8 02/26/19 15:45

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.102	0.101	102	101	1	75.0-125			0.985	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory, from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank; there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43379** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **43379** RunNo: **58024**

Prep Date: **2/27/2019** Analysis Date: **2/28/2019** SeqNo: **1944338** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	0.017	0.020								J
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-43379** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **43379** RunNo: **58024**

Prep Date: **2/27/2019** Analysis Date: **2/28/2019** SeqNo: **1944339** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	104	50	150			
Beryllium	0.0020	0.0020	0.002000	0	102	50	150			
Cadmium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Chromium	0.0055	0.0060	0.006000	0	92.4	50	150			J
Copper	0.0085	0.0060	0.006000	0	142	50	150			
Iron	0.025	0.020	0.02000	0	125	50	150			
Manganese	0.0020	0.0020	0.002000	0	97.6	50	150			J
Silver	0.0044	0.0050	0.005000	0	89.0	50	150			J
Zinc	0.0064	0.010	0.005000	0	128	50	150			J

Sample ID: **LCS-43379** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **43379** RunNo: **58024**

Prep Date: **2/27/2019** Analysis Date: **2/28/2019** SeqNo: **1944340** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.9	85	115			
Beryllium	0.51	0.0020	0.5000	0	103	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.6	85	115			
Copper	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Manganese	0.50	0.0020	0.5000	0	99.0	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-D**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **D58024**	RunNo: **58024**
Prep Date:	Analysis Date: **2/28/2019**	SeqNo: **1944386** Units: **mg/L**

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

Sample ID: **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **D58024**	RunNo: **58024**
Prep Date:	Analysis Date: **2/28/2019**	SeqNo: **1944387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Beryllium	0.0018	0.0020	0.002000	0	87.6	50	150			J
Cadmium	0.0016	0.0020	0.002000	0	77.7	50	150			J
Chromium	0.0059	0.0060	0.006000	0	99.0	50	150			J
Copper	0.0037	0.0060	0.006000	0	62.2	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0020	0.0020	0.002000	0	98.3	50	150			J
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Zinc	0.0049	0.010	0.005000	0	97.2	50	150			J

Sample ID: **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **D58024**	RunNo: **58024**
Prep Date:	Analysis Date: **2/28/2019**	SeqNo: **1944388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.3	85	115			
Chromium	0.48	0.0060	0.5000	0	96.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.47	0.010	0.5000	0	94.9	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940792** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940793** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.6	50	150			J
Beryllium	0.0017	0.0020	0.002000	0	83.0	50	150			J
Cadmium	0.0015	0.0020	0.002000	0	75.3	50	150			J
Calcium	0.50	1.0	0.5000	0	99.7	50	150			J
Chromium	0.0051	0.0060	0.006000	0	84.7	50	150			J
Copper	0.0056	0.0060	0.006000	0	93.6	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.52	1.0	0.5000	0	103	50	150			J
Manganese	0.0018	0.0020	0.002000	0	90.1	50	150			J
Potassium	0.48	1.0	0.5000	0	96.6	50	150			J
Silver	0.0047	0.0050	0.005000	0	94.9	50	150			J
Sodium	0.62	1.0	0.5000	0	123	50	150			J
Zinc	0.0037	0.010	0.005000	0	73.2	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940794** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.2	85	115			
Beryllium	0.49	0.0020	0.5000	0	97.2	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940794** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.47	0.0020	0.5000	0	94.8	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.47	0.0060	0.5000	0	94.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.49	0.020	0.5000	0	97.9	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Potassium	49	1.0	50.00	0	98.6	85	115			
Silver	0.097	0.0050	0.1000	0	97.0	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			
Zinc	0.47	0.010	0.5000	0	94.0	85	115			

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940825** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	0.0019	0.0060								J
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Beryllium	0.0019	0.0020	0.002000	0	94.8	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	84.3	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.8	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0070	0.0060	0.006000	0	116	50	150			
Iron	0.019	0.020	0.02000	0	94.4	50	150			J
Magnesium	0.52	1.0	0.5000	0	105	50	150			J
Manganese	0.0019	0.0020	0.002000	0	96.6	50	150			J
Potassium	0.51	1.0	0.5000	0	101	50	150			J
Silver	0.0047	0.0050	0.005000	0	93.8	50	150			J
Zinc	0.0065	0.010	0.005000	0	129	50	150			J

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C57957**	RunNo: **57957**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1940827** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.5	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.9	85	115			
Cadmium	0.46	0.0020	0.5000	0	92.5	85	115			
Calcium	49	1.0	50.00	0	98.1	85	115			
Chromium	0.46	0.0060	0.5000	0	91.3	85	115			
Copper	0.49	0.0060	0.5000	0	97.2	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Magnesium	50	1.0	50.00	0	99.4	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Potassium	49	1.0	50.00	0	98.1	85	115			
Silver	0.092	0.0050	0.1000	0	92.1	85	115			
Zinc	0.45	0.010	0.5000	0	89.2	85	115			

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C58024**	RunNo: **58024**
Prep Date:	Analysis Date: **2/28/2019**	SeqNo: **1944558** Units: **mg/L**

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

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C58024**	RunNo: **58024**
Prep Date:	Analysis Date: **2/28/2019**	SeqNo: **1944559** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.65	1.0	0.5000	0	130	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C58024**	RunNo: **58024**
Prep Date:	Analysis Date: **2/28/2019**	SeqNo: **1944560** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	97.9	85	115			

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B58102**	RunNo: **58102**
Prep Date:	Analysis Date: **3/4/2019**	SeqNo: **1948188** Units: **mg/L**

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

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B58102**	RunNo: **58102**
Prep Date:	Analysis Date: **3/4/2019**	SeqNo: **1948192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.54	1.0	0.5000	0	108	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B58102**	RunNo: **58102**
Prep Date:	Analysis Date: **3/4/2019**	SeqNo: **1948193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.0	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **A57938**	RunNo: **57938**							
Prep Date:	Analysis Date: **2/25/2019**	SeqNo: **1940290**	Units: **mg/L**						

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **A57938**	RunNo: **57938**							
Prep Date:	Analysis Date: **2/25/2019**	SeqNo: **1940291**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00091	0.0010	0.001000	0	90.7	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	99.3	50	150			J
Lead	0.00050	0.00050	0.0005000	0	100	50	150			J
Selenium	0.0011	0.0010	0.001000	0	106	50	150			
Thallium	0.00049	0.00050	0.0005000	0	98.6	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **A57938**	RunNo: **57938**							
Prep Date:	Analysis Date: **2/25/2019**	SeqNo: **1940292**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	100	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Lead	0.012	0.00050	0.01250	0	99.9	85	115			
Selenium	0.025	0.0010	0.02500	0	98.4	85	115			
Thallium	0.013	0.00050	0.01250	0	101	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **MB-43379**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **43379**	RunNo: **58074**							
Prep Date: **2/27/2019**	Analysis Date: **3/1/2019**	SeqNo: **1946733**	Units: **mg/L**						

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43379**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **43379**	RunNo: **58074**
Prep Date: **2/27/2019**	Analysis Date: **3/1/2019**	SeqNo: **1946733** Units: **mg/L**

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

Sample ID: **MSLLLCS-43379**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **43379**	RunNo: **58074**
Prep Date: **2/27/2019**	Analysis Date: **3/1/2019**	SeqNo: **1946735** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	104	50	150			
Arsenic	0.00097	0.0010	0.001000	0	96.6	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.9	50	150			J
Selenium	0.00093	0.0010	0.001000	0	93.0	50	150			J
Thallium	0.00044	0.00050	0.0005000	0	88.9	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.3	50	150			J

Sample ID: **MSLCS-43379**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **43379**	RunNo: **58074**
Prep Date: **2/27/2019**	Analysis Date: **3/1/2019**	SeqNo: **1946737** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.1	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.3	85	115			
Selenium	0.025	0.0010	0.02500	0	99.0	85	115			
Thallium	0.012	0.00050	0.01250	0	96.3	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A57901**	RunNo: **57901**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938570** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A57901**	RunNo: **57901**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938571** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	103	50	150			
Arsenic	0.00098	0.0010	0.001000	0	97.8	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.7	50	150			J
Selenium	0.00099	0.0010	0.001000	0	98.9	50	150			J
Thallium	0.00048	0.00050	0.0005000	0	95.3	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A57901**	RunNo: **57901**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938572** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Lead	0.012	0.00050	0.01250	0	98.7	85	115			
Selenium	0.025	0.0010	0.02500	0	99.8	85	115			
Thallium	0.012	0.00050	0.01250	0	100	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B57938**	RunNo: **57938**
Prep Date:	Analysis Date: **2/25/2019**	SeqNo: **1940305** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B57938**	RunNo: **57938**
Prep Date:	Analysis Date: **2/25/2019**	SeqNo: **1940305** Units: **mg/L**

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

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B57938**	RunNo: **57938**
Prep Date:	Analysis Date: **2/25/2019**	SeqNo: **1940306** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00087	0.0010	0.001000	0	87.3	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.4	50	150			J
Selenium	0.0010	0.0010	0.001000	0	102	50	150			
Thallium	0.00049	0.00050	0.0005000	0	98.2	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.5	50	150			J

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B57938**	RunNo: **57938**
Prep Date:	Analysis Date: **2/25/2019**	SeqNo: **1940307** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.6	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.025	0.0010	0.02500	0	99.9	85	115			
Thallium	0.012	0.00050	0.01250	0	99.2	85	115			
Uranium	0.012	0.00050	0.01250	0	96.3	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B57981**	RunNo: **57981**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1941568** Units: **mg/L**

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

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B57981**	RunNo: **57981**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1941569** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.0	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B57981**	RunNo: **57981**
Prep Date:	Analysis Date: **2/26/2019**	SeqNo: **1941570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.1	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B58014**	RunNo: **58014**
Prep Date:	Analysis Date: **2/27/2019**	SeqNo: **1942597** Units: **mg/L**

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

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B58014**	RunNo: **58014**
Prep Date:	Analysis Date: **2/27/2019**	SeqNo: **1942598** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.9	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.8	50	150			J
Selenium	0.0010	0.0010	0.001000	0	103	50	150			
Thallium	0.00048	0.00050	0.0005000	0	96.9	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B58014**	RunNo: **58014**
Prep Date:	Analysis Date: **2/27/2019**	SeqNo: **1942599** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.012	0.00050	0.01250	0	98.9	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A58105**	RunNo: **58105**
Prep Date:	Analysis Date: **3/4/2019**	SeqNo: **1948387** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A58105**	RunNo: **58105**
Prep Date:	Analysis Date: **3/4/2019**	SeqNo: **1948387** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A58105**	RunNo: **58105**
Prep Date:	Analysis Date: **3/4/2019**	SeqNo: **1948388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00098	0.0010	0.001000	0	98.1	50	150			J
Selenium	0.0012	0.0010	0.001000	0	120	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A58105**	RunNo: **58105**
Prep Date:	Analysis Date: **3/4/2019**	SeqNo: **1948389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.4	85	115			
Selenium	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A58321**	RunNo: **58321**
Prep Date:	Analysis Date: **3/12/2019**	SeqNo: **1956368** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A58321**	RunNo: **58321**
Prep Date:	Analysis Date: **3/12/2019**	SeqNo: **1956369** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A58321**	RunNo: **58321**
Prep Date:	Analysis Date: **3/12/2019**	SeqNo: **1956370** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.8	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**
20-Mar-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43557**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **PBW**	Batch ID: **43557**	RunNo: **58196**							
Prep Date: **3/7/2019**	Analysis Date: **3/7/2019**	SeqNo: **1951807**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-43557**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **LCSW**	Batch ID: **43557**	RunNo: **58196**							
Prep Date: **3/7/2019**	Analysis Date: **3/7/2019**	SeqNo: **1951808**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.8	80	120			

Sample ID: **1902922-003FMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **OW-57**	Batch ID: **43557**	RunNo: **58196**							
Prep Date: **3/7/2019**	Analysis Date: **3/7/2019**	SeqNo: **1951810**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	.00004845	92.8	75	125			

Sample ID: **1902922-003FMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **OW-57**	Batch ID: **43557**	RunNo: **58196**							
Prep Date: **3/7/2019**	Analysis Date: **3/7/2019**	SeqNo: **1951811**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	.00004845	93.0	75	125	0.259	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R57874**	RunNo: **57874**							
Prep Date:	Analysis Date: **2/21/2019**	SeqNo: **1937720**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.083	0.50								J
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R57874**	RunNo: **57874**							
Prep Date:	Analysis Date: **2/21/2019**	SeqNo: **1937721**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.2	90	110			
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.2	90	110			
Bromide	2.4	0.10	2.500	0	95.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.4	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.2	90	110			
Sulfate	9.8	0.50	10.00	0	97.5	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **A58183**	RunNo: **58183**							
Prep Date:	Analysis Date: **3/6/2019**	SeqNo: **1951348**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	0.071	0.50								J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **A58183**	RunNo: **58183**							
Prep Date:	Analysis Date: **3/6/2019**	SeqNo: **1951349**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	95.0	90	110			
Sulfate	9.8	0.50	10.00	0	98.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-43398**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **43398**	RunNo: **58040**
Prep Date: **2/28/2019**	Analysis Date: **2/28/2019**	SeqNo: **1945027** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-43398**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **43398**	RunNo: **58040**
Prep Date: **2/28/2019**	Analysis Date: **2/28/2019**	SeqNo: **1945029** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.098	0.010	0.1000	0	98.3	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-43296**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **43296**	RunNo: **57917**
Prep Date: **2/22/2019**	Analysis Date: **2/26/2019**	SeqNo: **1940367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	71.8	135			
Surr: DNOP	0.44		0.5000		88.6	70	130			

Sample ID: **MB-43296**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **43296**	RunNo: **57917**
Prep Date: **2/22/2019**	Analysis Date: **2/26/2019**	SeqNo: **1940368** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.94		1.000		93.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **B28**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G57873**	RunNo: **57873**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	21		20.00		106	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G57873**	RunNo: **57873**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	103	77.7	130			
Surr: BFB	21		20.00		105	72.8	125			

Sample ID: **1902922-003AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-57**	Batch ID: **G57873**	RunNo: **57873**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938763** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	37	1.0	10.00	25.32	121	65.4	140			
Surr: BFB	470		400.0		117	72.8	125			

Sample ID: **1902922-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-57**	Batch ID: **G57873**	RunNo: **57873**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938764** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	35	1.0	10.00	25.32	94.7	65.4	140	7.29	20	
Surr: BFB	460		400.0		116	72.8	125	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R57879**	RunNo: **57879**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938095** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	116	70	130			
Toluene	20	1.0	20.00	0	98.5	70	130			
Chlorobenzene	20	1.0	20.00	0	98.0	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		116	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57879**	RunNo: **57879**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938096** Units: **µg/L**

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57879**	RunNo: **57879**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938096** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R57879**	RunNo: **57879**
Prep Date:	Analysis Date: **2/22/2019**	SeqNo: **1938096** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	12		10.00		115	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **1902922-004cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-63** Batch ID: **43384** RunNo: **58171**

Prep Date: **2/27/2019** Analysis Date: **3/6/2019** SeqNo: **1950803** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	52	10	100.0	0	52.0	15	123			
4-Chloro-3-methylphenol	120	10	200.0	0	59.0	26.6	118			
2-Chlorophenol	110	10	200.0	0	54.1	15	120			
1,4-Dichlorobenzene	42	10	100.0	0	41.9	19	108			
2,4-Dinitrotoluene	46	10	100.0	0	46.4	27.8	103			
N-Nitrosodi-n-propylamine	69	10	100.0	0	68.7	32.3	126			
4-Nitrophenol	53	10	200.0	0	26.3	15	72.1			
Pentachlorophenol	97	20	200.0	0	48.4	15	114			
Phenol	85	10	200.0	22.82	31.0	15	67.5			
Pyrene	53	10	100.0	0	53.2	31.2	112			
1,2,4-Trichlorobenzene	44	10	100.0	0	43.7	22.1	123			
Surr: 2-Fluorophenol	80		200.0		40.2	15	101			
Surr: Phenol-d5	63		200.0		31.5	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		58.8	27.8	112			
Surr: Nitrobenzene-d5	54		100.0		53.7	33	113			
Surr: 2-Fluorobiphenyl	44		100.0		44.1	26.6	107			
Surr: 4-Terphenyl-d14	47		100.0		46.6	18.7	148			

Sample ID: **1902922-004cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-63** Batch ID: **43384** RunNo: **58171**

Prep Date: **2/27/2019** Analysis Date: **3/6/2019** SeqNo: **1950804** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	52	10	100.0	0	51.7	15	123	0.617	30.5	
4-Chloro-3-methylphenol	120	10	200.0	0	57.6	26.6	118	2.40	50	
2-Chlorophenol	110	10	200.0	0	56.2	15	120	3.75	36.3	
1,4-Dichlorobenzene	44	10	100.0	0	43.8	19	108	4.29	42.1	
2,4-Dinitrotoluene	46	10	100.0	0	45.7	27.8	103	1.52	28.5	
N-Nitrosodi-n-propylamine	69	10	100.0	0	68.7	32.3	126	0.0291	25.4	
4-Nitrophenol	51	10	200.0	0	25.7	15	72.1	2.54	50	
Pentachlorophenol	94	20	200.0	0	47.0	15	114	3.06	50	
Phenol	86	10	200.0	22.82	31.4	15	67.5	1.08	46.1	
Pyrene	51	10	100.0	0	51.4	31.2	112	3.48	34.3	
1,2,4-Trichlorobenzene	45	10	100.0	0	44.6	22.1	123	2.08	43.6	
Surr: 2-Fluorophenol	80		200.0		39.9	15	101	0	0	
Surr: Phenol-d5	59		200.0		29.5	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		57.2	27.8	112	0	0	
Surr: Nitrobenzene-d5	51		100.0		50.8	33	113	0	0	
Surr: 2-Fluorobiphenyl	43		100.0		42.5	26.6	107	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**

20-Mar-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **1902922-004cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-63**	Batch ID: **43384**	RunNo: **58171**
Prep Date: **2/27/2019**	Analysis Date: **3/6/2019**	SeqNo: **1950804** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	44		100.0		43.8	18.7	148	0	0	

Sample ID: **lcs-43262**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **43262**	RunNo: **58171**
Prep Date: **2/20/2019**	Analysis Date: **3/6/2019**	SeqNo: **1950814** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	51		200.0		25.3	15	101			
Surr: Phenol-d5	41		200.0		20.7	15	84.6			
Surr: 2,4,6-Tribromophenol	81		200.0		40.6	27.8	112			
Surr: Nitrobenzene-d5	33		100.0		32.6	33	113			S
Surr: 2-Fluorobiphenyl	25		100.0		24.6	26.6	107			S
Surr: 4-Terphenyl-d14	43		100.0		43.3	18.7	148			

Sample ID: **lcs-43384**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **43384**	RunNo: **58171**
Prep Date: **2/27/2019**	Analysis Date: **3/6/2019**	SeqNo: **1950815** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	80.0	55.1	104			
4-Chloro-3-methylphenol	180	10	200.0	0	88.8	57	115			
2-Chlorophenol	140	10	200.0	0	69.2	43.4	112			
1,4-Dichlorobenzene	50	10	100.0	0	50.0	38	95.2			
2,4-Dinitrotoluene	73	10	100.0	0	72.8	55.1	96.7			
N-Nitrosodi-n-propylamine	91	10	100.0	0	91.2	55	112			
4-Nitrophenol	110	10	200.0	0	54.2	16.6	93			
Pentachlorophenol	150	20	200.0	0	73.4	43.2	104			
Phenol	92	10	200.0	0	46.2	21.3	85.7			
Pyrene	75	10	100.0	0	75.2	64.9	105			
1,2,4-Trichlorobenzene	65	10	100.0	0	65.2	42.6	107			
Surr: 2-Fluorophenol	78		200.0		39.2	15	101			
Surr: Phenol-d5	69		200.0		34.3	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		76.4	27.8	112			
Surr: Nitrobenzene-d5	60		100.0		59.8	33	113			
Surr: 2-Fluorobiphenyl	50		100.0		49.9	26.6	107			
Surr: 4-Terphenyl-d14	59		100.0		59.1	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**
20-Mar-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **mb-43384**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43384**	RunNo: **58171**
Prep Date: **2/27/2019**	Analysis Date: **3/6/2019**	SeqNo: **1950816** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.2	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1902922**
20-Mar-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **mb-43384**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43384**	RunNo: **58171**
Prep Date: **2/27/2019**	Analysis Date: **3/6/2019**	SeqNo: **1950816** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	91		200.0		45.7	15	101			
Surr: Phenol-d5	70		200.0		34.9	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		61.9	27.8	112			
Surr: Nitrobenzene-d5	59		100.0		59.4	33	113			
Surr: 2-Fluorobiphenyl	52		100.0		52.1	26.6	107			
Surr: 4-Terphenyl-d14	49		100.0		49.0	18.7	148			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1902922 RcptNo: 1

Received By: **Desiree Dominguez** 2/21/2019 11:30:00 AM

Completed By: **Erin Melendrez** 2/21/2019 11:42:09 AM

Reviewed By: IO 02/21/2019 @ 13:45

LB: 300's: ENM 2/21/19, TMM 2-21-19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 3 0 2 (<2 or >12 unless noted)

Adjusted? NO

Checked by: ENM 2/21/19 IMO 2/21/19

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			
2	2.6	Good	Yes			
3	3.8	Good	Yes			
4	3.6	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard Rush_____

Project Name:

2019 1ST QTR GW SAMPLING

Project #:

OW/MKTF/PW-3/4

Project Manager:

BRIAN MOORE

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.7°c 2.6°c 3.8°c 3.6°c

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1902922	8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE								Air Bubbles (Y or N)
2/20/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X															
2/20/2019		AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X															
2/20/2019	933	AQUEOUS	OW-57	MISC	MISC	-003	X	X	X	X	X	X										
2/20/2019	1006	AQUEOUS	OW-63	MISC	MISC	-004	X	X	2	X	X	X										
2/20/2019	1055	AQUEOUS	PW-3	MISC	MISC	-005	X		X	X	X	X		X								
2/20/2019	1632	AQUEOUS	MKTF-21	MISC	MISC	-006	X	X	X	X	X	X										
2/20/2019	1540	AQUEOUS	MKTF-20	MISC	MISC	-007	X	X	2	X	X	X										
2/20/2019	1610	AQUEOUS	MKTF-16	MISC	MISC	-008	X	X	X	X	X	X										
2/20/2019	1340	AQUEOUS	PW-4	MISC	MISC	-009	X		X	X	X	X		X								
2/20/2019	1355	AQUEOUS	MKTF-31	MISC	MISC	-010	X	X	X	X	X	X	X									
2/20/2019	1436	AQUEOUS	DUPLICATE	MISC	MISC	-011	X	X	X	X	X	X	X									
2/20/2019	1530	AQUEOU	MKTF-40			-012	X	X	X	X	X	X	X									

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/20/19	0830		Courier	2/21/19	11:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	02/26/2019 15:43	WG1241499

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	02/26/2019 15:46	WG1241499

Method Blank (MB)

(MB) R3387024-1 02/26/19 15:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

Laboratory Control Sample (LCS)

(LCS) R3387024-2 02/26/19 15:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.106	106	85.0-115	

L1071729-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1071729-01 02/26/19 15:25 • (MS) R3387024-4 02/26/19 15:28 • (MSD) R3387024-5 02/26/19 15:29

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.105	0.0987	105	98.7	1	75.0-125			6.19	20

L1072535-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1072535-01 02/26/19 15:43 • (MS) R3387024-7 02/26/19 15:44 • (MSD) R3387024-8 02/26/19 15:45

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.102	0.101	102	101	1	75.0-125			0.985	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	02/26/2019 15:43	WG1241499

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	02/26/2019 15:46	WG1241499

Method Blank (MB)

(MB) R3387024-1 02/26/19 15:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

Laboratory Control Sample (LCS)

(LCS) R3387024-2 02/26/19 15:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.106	106	85.0-115	

L1071729-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1071729-01 02/26/19 15:25 • (MS) R3387024-4 02/26/19 15:28 • (MSD) R3387024-5 02/26/19 15:29

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.105	0.0987	105	98.7	1	75.0-125			6.19	20

L1072535-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1072535-01 02/26/19 15:43 • (MS) R3387024-7 02/26/19 15:44 • (MSD) R3387024-8 02/26/19 15:45

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.102	0.101	102	101	1	75.0-125			0.985	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 22, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 1st QTR GW SAMPLING OrderNo.: 1903C58

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 17 sample(s) on 3/26/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Case Narrative

WO#: **1903C58**
Date: **4/22/2019**

CLIENT: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Analytial Notes Regarding the "Duplicate" sample. It is believed that the duplicate sample had a fuel sheen which caused the DRO/MRO and 8270 results to have higher values than its parent sample. The tests that would be impacted by this sheen are Diesel/Motor Oil and 8270.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:00:00 AM
Lab ID: 1903C58-001 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.28	0.17	1.0	J	µg/L	1	4/1/2019 3:47:08 PM	R58813
Toluene	ND	0.35	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Naphthalene	0.34	0.28	2.0	J	µg/L	1	4/1/2019 3:47:08 PM	R58813
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Acetone	4.1	1.2	10	J	µg/L	1	4/1/2019 3:47:08 PM	R58813
Bromobenzene	ND	0.24	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Bromoform	ND	0.29	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Bromomethane	ND	0.27	3.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
2-Butanone	ND	2.1	10		µg/L	1	4/1/2019 3:47:08 PM	R58813
Carbon disulfide	ND	0.45	10		µg/L	1	4/1/2019 3:47:08 PM	R58813
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Chloroethane	ND	0.18	2.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Chloroform	ND	0.12	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Chloromethane	ND	0.32	3.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Dibromomethane	ND	0.21	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/1/2019 3:47:08 PM	R58813

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:00:00 AM
Lab ID: 1903C58-001 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
2-Hexanone	ND	1.5	10		µg/L	1	4/1/2019 3:47:08 PM	R58813
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/1/2019 3:47:08 PM	R58813
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Styrene	ND	0.19	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/1/2019 3:47:08 PM	R58813
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/1/2019 3:47:08 PM	R58813
Surr: 1,2-Dichloroethane-d4	81.4	0	70-130		%Rec	1	4/1/2019 3:47:08 PM	R58813
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	4/1/2019 3:47:08 PM	R58813
Surr: Dibromofluoromethane	80.0	0	70-130		%Rec	1	4/1/2019 3:47:08 PM	R58813
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	4/1/2019 3:47:08 PM	R58813

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:00:00 AM
Lab ID: 1903C58-002 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Toluene	ND	0.35	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Naphthalene	ND	0.28	2.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Acetone	4.3	1.2	10	J	µg/L	1	4/1/2019 4:15:46 PM	R58813
Bromobenzene	ND	0.24	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Bromoform	ND	0.29	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Bromomethane	ND	0.27	3.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
2-Butanone	ND	2.1	10		µg/L	1	4/1/2019 4:15:46 PM	R58813
Carbon disulfide	ND	0.45	10		µg/L	1	4/1/2019 4:15:46 PM	R58813
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Chloroethane	ND	0.18	2.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Chloroform	ND	0.12	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Chloromethane	ND	0.32	3.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Dibromomethane	ND	0.21	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/1/2019 4:15:46 PM	R58813

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:00:00 AM
Lab ID: 1903C58-002 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
2-Hexanone	ND	1.5	10		µg/L	1	4/1/2019 4:15:46 PM	R58813
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/1/2019 4:15:46 PM	R58813
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Styrene	ND	0.19	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/1/2019 4:15:46 PM	R58813
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/1/2019 4:15:46 PM	R58813
Surr: 1,2-Dichloroethane-d4	81.6	0	70-130		%Rec	1	4/1/2019 4:15:46 PM	R58813
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	4/1/2019 4:15:46 PM	R58813
Surr: Dibromofluoromethane	80.5	0	70-130		%Rec	1	4/1/2019 4:15:46 PM	R58813
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	4/1/2019 4:15:46 PM	R58813

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:16:00 AM
Lab ID: 1903C58-003 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.9	0.35	1.0		mg/L	1	3/29/2019 5:05:05 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 5:05:05 PM	43943
Surr: DNOP	110	0	70-130		%Rec	1	3/29/2019 5:05:05 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.70	0.25	0.50		mg/L	5	3/27/2019 1:39:38 PM	R58708
Chloride	130	10	10		mg/L	20	3/27/2019 1:52:30 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 1:39:38 PM	R58708
Bromide	1.7	0.068	0.50		mg/L	5	3/27/2019 1:39:38 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 1:39:38 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 1:39:38 PM	R58708
Sulfate	48	0.32	2.5		mg/L	5	3/27/2019 1:39:38 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:01:19 PM	A59060
Barium	0.50	0.00065	0.0020		mg/L	1	4/10/2019 5:01:19 PM	A59060
Beryllium	0.00033	0.00028	0.0020	J	mg/L	1	4/10/2019 5:01:19 PM	A59060
Boron	0.34	0.0045	0.040		mg/L	1	4/10/2019 5:01:19 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:01:19 PM	A59060
Calcium	110	0.31	5.0		mg/L	5	4/5/2019 4:21:30 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:01:19 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:01:19 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:01:19 PM	A59060
Iron	0.23	0.0087	0.020		mg/L	1	4/10/2019 5:01:19 PM	A59060
Magnesium	23	0.050	1.0		mg/L	1	4/10/2019 5:01:19 PM	A59060
Manganese	2.7	0.0014	0.010	*	mg/L	5	4/5/2019 4:21:30 PM	A58959
Molybdenum	0.0087	0.0067	0.0080		mg/L	1	4/10/2019 5:01:19 PM	A59060
Nickel	0.0043	0.0040	0.010	J	mg/L	1	4/10/2019 5:01:19 PM	A59060
Potassium	0.72	0.16	1.0	J	mg/L	1	4/10/2019 5:01:19 PM	A59060
Silver	0.0016	0.00094	0.0050	J	mg/L	1	4/10/2019 5:01:19 PM	A59060
Sodium	260	2.1	5.0		mg/L	5	4/5/2019 4:21:30 PM	A58959
Zinc	0.034	0.0023	0.010		mg/L	1	4/10/2019 5:01:19 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.38	0.0046	0.020	*	mg/L	1	4/1/2019 4:44:04 PM	43970
Barium	0.51	0.00065	0.0020		mg/L	1	4/1/2019 4:44:04 PM	43970
Beryllium	ND	0.00028	0.0020		mg/L	1	4/1/2019 4:44:04 PM	43970
Boron	0.35	0.0045	0.040		mg/L	1	4/1/2019 4:44:04 PM	43970
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 4:44:04 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 4:44:04 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 4:44:04 PM	43970

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:16:00 AM
Lab ID: 1903C58-003
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 4:44:04 PM	43970
Iron	2.2	0.044	0.10	*	mg/L	5	4/1/2019 4:46:05 PM	43970
Manganese	2.8	0.0014	0.010	*	mg/L	5	4/1/2019 4:46:05 PM	43970
Molybdenum	0.0076	0.0067	0.0080	J	mg/L	1	4/1/2019 4:44:04 PM	43970
Nickel	0.0062	0.0040	0.010	J	mg/L	1	4/1/2019 4:44:04 PM	43970
Silver	0.0020	0.0014	0.0050	J	mg/L	1	4/1/2019 4:44:04 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 4:44:04 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 7:43:49 PM	C58733
Arsenic	0.0022	0.00010	0.0010		mg/L	1	3/28/2019 7:43:49 PM	C58733
Lead	ND	0.000055	0.00050		mg/L	1	3/28/2019 7:43:49 PM	C58733
Selenium	0.00027	0.00017	0.0010	J	mg/L	1	3/28/2019 7:43:49 PM	C58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 7:43:49 PM	C58733
Uranium	0.0049	0.000075	0.00050		mg/L	1	4/4/2019 9:05:12 PM	A58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:11:20 PM	43970
Arsenic	0.0052	0.00031	0.0010		mg/L	1	4/1/2019 3:11:20 PM	43970
Lead	0.00018	0.000055	0.00050	J	mg/L	1	4/1/2019 3:11:20 PM	43970
Selenium	ND	0.00048	0.0010		mg/L	1	4/1/2019 3:11:20 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:11:20 PM	43970
Uranium	0.0047	0.000085	0.00050		mg/L	1	4/1/2019 3:11:20 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	4/9/2019 12:41:38 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Benzoic acid	12	6.3	20	J	µg/L	1	4/8/2019 3:26:20 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 3:26:20 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:16:00 AM
Lab ID: 1903C58-003
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 3:26:20 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 3:26:20 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 3:26:20 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 3:26:20 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 3:26:20 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 3:26:20 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 3:26:20 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 3:26:20 PM	43941
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 3:26:20 PM	43941

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:16:00 AM
Lab ID: 1903C58-003 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 3:26:20 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 3:26:20 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 3:26:20 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Naphthalene	8.1	5.0	10	J	µg/L	1	4/8/2019 3:26:20 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 3:26:20 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 3:26:20 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Phenol	23	6.0	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 3:26:20 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 3:26:20 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 3:26:20 PM	43941
Surr: 2-Fluorophenol	50.1	0	15-101		%Rec	1	4/8/2019 3:26:20 PM	43941
Surr: Phenol-d5	36.9	0	15-84.6		%Rec	1	4/8/2019 3:26:20 PM	43941
Surr: 2,4,6-Tribromophenol	70.6	0	27.8-112		%Rec	1	4/8/2019 3:26:20 PM	43941
Surr: Nitrobenzene-d5	65.8	0	33-113		%Rec	1	4/8/2019 3:26:20 PM	43941
Surr: 2-Fluorobiphenyl	48.7	0	26.6-107		%Rec	1	4/8/2019 3:26:20 PM	43941
Surr: 4-Terphenyl-d14	62.8	0	18.7-148		%Rec	1	4/8/2019 3:26:20 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	980	8.3	50		µg/L	50	4/1/2019 4:44:14 PM	R58813
Toluene	ND	1.8	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Ethylbenzene	90	0.66	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Methyl tert-butyl ether (MTBE)	4600	23	50		µg/L	50	4/1/2019 4:44:14 PM	R58813
1,2,4-Trimethylbenzene	22	1.1	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Naphthalene	13	1.4	10		µg/L	5	4/1/2019 6:10:14 PM	R58813
1-Methylnaphthalene	6.0	1.6	20	J	µg/L	5	4/1/2019 6:10:14 PM	R58813
2-Methylnaphthalene	ND	1.7	20		µg/L	5	4/1/2019 6:10:14 PM	R58813
Acetone	ND	6.0	50		µg/L	5	4/1/2019 6:10:14 PM	R58813
Bromobenzene	ND	1.2	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:16:00 AM
Lab ID: 1903C58-003
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.67	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Bromoform	ND	1.4	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Bromomethane	ND	1.4	15		µg/L	5	4/1/2019 6:10:14 PM	R58813
2-Butanone	ND	10	50		µg/L	5	4/1/2019 6:10:14 PM	R58813
Carbon disulfide	ND	2.3	50		µg/L	5	4/1/2019 6:10:14 PM	R58813
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Chlorobenzene	ND	0.97	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Chloroethane	ND	0.89	10		µg/L	5	4/1/2019 6:10:14 PM	R58813
Chloroform	ND	0.61	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Chloromethane	ND	1.6	15		µg/L	5	4/1/2019 6:10:14 PM	R58813
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	4/1/2019 6:10:14 PM	R58813
Dibromochloromethane	ND	1.2	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Dibromomethane	ND	1.0	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
2,2-Dichloropropane	ND	1.2	10		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
2-Hexanone	ND	7.7	50		µg/L	5	4/1/2019 6:10:14 PM	R58813
Isopropylbenzene	2.8	0.96	5.0	J	µg/L	5	4/1/2019 6:10:14 PM	R58813
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	4/1/2019 6:10:14 PM	R58813
Methylene Chloride	ND	0.77	15		µg/L	5	4/1/2019 6:10:14 PM	R58813
n-Butylbenzene	ND	1.1	15		µg/L	5	4/1/2019 6:10:14 PM	R58813
n-Propylbenzene	2.1	1.1	5.0	J	µg/L	5	4/1/2019 6:10:14 PM	R58813
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Styrene	ND	0.96	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:16:00 AM
Lab ID: 1903C58-003 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	4/1/2019 6:10:14 PM	R58813
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	4/1/2019 6:10:14 PM	R58813
Vinyl chloride	ND	0.90	5.0		µg/L	5	4/1/2019 6:10:14 PM	R58813
Xylenes, Total	21	2.3	7.5		µg/L	5	4/1/2019 6:10:14 PM	R58813
Surr: 1,2-Dichloroethane-d4	82.7	0	70-130		%Rec	5	4/1/2019 6:10:14 PM	R58813
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	5	4/1/2019 6:10:14 PM	R58813
Surr: Dibromofluoromethane	79.4	0	70-130		%Rec	5	4/1/2019 6:10:14 PM	R58813
Surr: Toluene-d8	95.6	0	70-130		%Rec	5	4/1/2019 6:10:14 PM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	7.0	1.5	2.5		mg/L	50	4/1/2019 4:44:14 PM	G58813
Surr: BFB	99.9	0	70-130		%Rec	50	4/1/2019 4:44:14 PM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:36:00 AM
Lab ID: 1903C58-004
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/1/2019 12:28:58 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	8.7	0.35	1.0		mg/L	1	3/29/2019 6:18:09 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 6:18:09 PM	43943
Surr: DNOP	110	0	70-130		%Rec	1	3/29/2019 6:18:09 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	3/27/2019 2:05:22 PM	R58708
Chloride	140	10	10		mg/L	20	3/27/2019 2:18:13 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 2:05:22 PM	R58708
Bromide	1.5	0.068	0.50		mg/L	5	3/27/2019 2:05:22 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 2:05:22 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 2:05:22 PM	R58708
Sulfate	0.34	0.32	2.5	J	mg/L	5	3/27/2019 2:05:22 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:03:32 PM	A59060
Barium	1.8	0.0065	0.020		mg/L	10	4/5/2019 4:34:57 PM	A58959
Beryllium	0.00037	0.00028	0.0020	J	mg/L	1	4/10/2019 5:03:32 PM	A59060
Boron	0.30	0.0045	0.040		mg/L	1	4/10/2019 5:03:32 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:03:32 PM	A59060
Calcium	140	0.62	10		mg/L	10	4/5/2019 4:34:57 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:03:32 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:03:32 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:03:32 PM	A59060
Iron	9.9	0.087	0.20	*	mg/L	10	4/5/2019 4:34:57 PM	A58959
Magnesium	30	0.050	1.0		mg/L	1	4/10/2019 5:03:32 PM	A59060
Manganese	2.2	0.0029	0.020	*	mg/L	10	4/5/2019 4:34:57 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:03:32 PM	A59060
Nickel	0.0045	0.0040	0.010	J	mg/L	1	4/10/2019 5:03:32 PM	A59060
Potassium	0.69	0.16	1.0	J	mg/L	1	4/10/2019 5:03:32 PM	A59060
Silver	0.0013	0.00094	0.0050	J	mg/L	1	4/10/2019 5:03:32 PM	A59060
Sodium	280	4.2	10		mg/L	10	4/5/2019 4:34:57 PM	A58959
Zinc	0.026	0.0023	0.010		mg/L	1	4/10/2019 5:03:32 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	11	0.23	1.0	*	mg/L	50	4/1/2019 4:52:43 PM	43970
Barium	2.0	0.0032	0.010	*	mg/L	5	4/1/2019 4:50:32 PM	43970
Beryllium	0.00089	0.00028	0.0020	J	mg/L	1	4/1/2019 4:48:29 PM	43970
Boron	0.31	0.0045	0.040		mg/L	1	4/1/2019 4:48:29 PM	43970

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:36:00 AM
Lab ID: 1903C58-004
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 4:48:29 PM	43970
Chromium	0.0034	0.0015	0.0060	J	mg/L	1	4/1/2019 4:48:29 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 4:48:29 PM	43970
Copper	0.0073	0.0041	0.0060		mg/L	1	4/1/2019 4:48:29 PM	43970
Iron	11	0.44	1.0	*	mg/L	50	4/1/2019 4:52:43 PM	43970
Manganese	2.6	0.0014	0.010	*	mg/L	5	4/1/2019 4:50:32 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 4:48:29 PM	43970
Nickel	0.013	0.0040	0.010		mg/L	1	4/1/2019 4:48:29 PM	43970
Silver	0.0016	0.0014	0.0050	J	mg/L	1	4/1/2019 4:48:29 PM	43970
Zinc	0.042	0.0058	0.010		mg/L	1	4/1/2019 4:48:29 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00061	0.00039	0.0010	J	mg/L	1	3/28/2019 7:46:26 PM	C58733
Arsenic	0.013	0.00010	0.0010	*	mg/L	1	3/28/2019 7:46:26 PM	C58733
Lead	0.0020	0.000055	0.00050		mg/L	1	3/28/2019 7:46:26 PM	C58733
Selenium	0.00039	0.00017	0.0010	J	mg/L	1	3/28/2019 7:46:26 PM	C58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 7:46:26 PM	C58733
Uranium	0.00029	0.000075	0.00050	J	mg/L	1	4/4/2019 9:07:49 PM	A58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:13:27 PM	43970
Arsenic	0.010	0.00031	0.0010	*	mg/L	1	4/1/2019 3:13:27 PM	43970
Lead	0.010	0.000055	0.00050		mg/L	1	4/1/2019 3:13:27 PM	43970
Selenium	0.0020	0.00048	0.0010		mg/L	1	4/1/2019 3:13:27 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:13:27 PM	43970
Uranium	0.0022	0.000085	0.00050		mg/L	1	4/1/2019 3:13:27 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000090	0.000038	0.00020	J	mg/L	1	4/9/2019 12:52:59 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 3:55:53 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:36:00 AM
Lab ID: 1903C58-004
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 3:55:53 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 3:55:53 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 3:55:53 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 3:55:53 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 3:55:53 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 3:55:53 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 3:55:53 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 3:55:53 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Fluorene	7.7	6.3	10	J	µg/L	1	4/8/2019 3:55:53 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 3:55:53 PM	43941

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:36:00 AM
Lab ID: 1903C58-004
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	120	7.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2-Methylnaphthalene	180	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 3:55:53 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 3:55:53 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 3:55:53 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 3:55:53 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Naphthalene	340	25	50		µg/L	5	4/12/2019 2:20:12 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 3:55:53 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 3:55:53 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Phenol	16	6.0	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 3:55:53 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 3:55:53 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 3:55:53 PM	43941
Surr: 2-Fluorophenol	43.1	0	15-101		%Rec	1	4/8/2019 3:55:53 PM	43941
Surr: Phenol-d5	30.5	0	15-84.6		%Rec	1	4/8/2019 3:55:53 PM	43941
Surr: 2,4,6-Tribromophenol	57.0	0	27.8-112		%Rec	1	4/8/2019 3:55:53 PM	43941
Surr: Nitrobenzene-d5	52.7	0	33-113		%Rec	1	4/8/2019 3:55:53 PM	43941
Surr: 2-Fluorobiphenyl	45.7	0	26.6-107		%Rec	1	4/8/2019 3:55:53 PM	43941
Surr: 4-Terphenyl-d14	54.5	0	18.7-148		%Rec	1	4/8/2019 3:55:53 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1300	3.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Toluene	ND	7.0	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Ethylbenzene	710	2.6	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Methyl tert-butyl ether (MTBE)	6900	91	200		µg/L	200	4/1/2019 7:35:38 PM	R58813
1,2,4-Trimethylbenzene	550	4.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,3,5-Trimethylbenzene	95	3.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Naphthalene	510	5.5	40		µg/L	20	4/1/2019 8:04:20 PM	R58813
1-Methylnaphthalene	220	6.3	80		µg/L	20	4/1/2019 8:04:20 PM	R58813

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S	% Recovery outside of range due to dilution or matrix
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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:36:00 AM
Lab ID: 1903C58-004
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	260	6.9	80		µg/L	20	4/1/2019 8:04:20 PM	R58813
Acetone	ND	24	200		µg/L	20	4/1/2019 8:04:20 PM	R58813
Bromobenzene	ND	4.9	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Bromodichloromethane	ND	2.7	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Bromoform	ND	5.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Bromomethane	ND	5.5	60		µg/L	20	4/1/2019 8:04:20 PM	R58813
2-Butanone	ND	42	200		µg/L	20	4/1/2019 8:04:20 PM	R58813
Carbon disulfide	ND	9.1	200		µg/L	20	4/1/2019 8:04:20 PM	R58813
Carbon Tetrachloride	ND	2.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Chlorobenzene	ND	3.9	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Chloroethane	ND	3.6	40		µg/L	20	4/1/2019 8:04:20 PM	R58813
Chloroform	ND	2.4	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Chloromethane	ND	6.4	60		µg/L	20	4/1/2019 8:04:20 PM	R58813
2-Chlorotoluene	ND	4.9	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
4-Chlorotoluene	ND	4.7	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
cis-1,2-DCE	ND	3.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	4/1/2019 8:04:20 PM	R58813
Dibromochloromethane	ND	4.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Dibromomethane	ND	4.2	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,1-Dichloroethane	ND	2.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,1-Dichloroethene	ND	4.1	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2-Dichloropropane	ND	4.2	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,3-Dichloropropane	ND	4.0	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
2,2-Dichloropropane	ND	4.7	40		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,1-Dichloropropene	ND	3.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Hexachlorobutadiene	ND	6.2	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
2-Hexanone	ND	31	200		µg/L	20	4/1/2019 8:04:20 PM	R58813
Isopropylbenzene	33	3.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
4-Isopropyltoluene	ND	4.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
4-Methyl-2-pentanone	ND	14	200		µg/L	20	4/1/2019 8:04:20 PM	R58813
Methylene Chloride	ND	3.1	60		µg/L	20	4/1/2019 8:04:20 PM	R58813
n-Butylbenzene	ND	4.6	60		µg/L	20	4/1/2019 8:04:20 PM	R58813
n-Propylbenzene	98	4.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
sec-Butylbenzene	ND	5.0	20		µg/L	20	4/1/2019 8:04:20 PM	R58813

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 7:36:00 AM
Lab ID: 1903C58-004
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	3.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
tert-Butylbenzene	ND	4.1	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	4/1/2019 8:04:20 PM	R58813
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
trans-1,2-DCE	ND	3.6	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Trichlorofluoromethane	ND	3.8	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	4/1/2019 8:04:20 PM	R58813
Vinyl chloride	ND	3.6	20		µg/L	20	4/1/2019 8:04:20 PM	R58813
Xylenes, Total	610	9.1	30		µg/L	20	4/1/2019 8:04:20 PM	R58813
Surr: 1,2-Dichloroethane-d4	86.3	0	70-130		%Rec	20	4/1/2019 8:04:20 PM	R58813
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	20	4/1/2019 8:04:20 PM	R58813
Surr: Dibromofluoromethane	82.2	0	70-130		%Rec	20	4/1/2019 8:04:20 PM	R58813
Surr: Toluene-d8	96.7	0	70-130		%Rec	20	4/1/2019 8:04:20 PM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	17	0.61	1.0		mg/L	20	4/1/2019 8:04:20 PM	G58813
Surr: BFB	101	0	70-130		%Rec	20	4/1/2019 8:04:20 PM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:06:00 AM
Lab ID: 1903C58-005
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	4/1/2019 12:58:46 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	3/29/2019 6:42:35 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 6:42:35 PM	43943
Surr: DNOP	106	0	70-130		%Rec	1	3/29/2019 6:42:35 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.29	0.25	0.50	J	mg/L	5	3/27/2019 2:31:05 PM	R58708
Chloride	100	10	10		mg/L	20	3/27/2019 2:43:57 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 2:31:05 PM	R58708
Bromide	0.70	0.068	0.50		mg/L	5	3/27/2019 2:31:05 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 2:31:05 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 2:31:05 PM	R58708
Sulfate	180	0.32	2.5		mg/L	5	3/27/2019 2:31:05 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:05:33 PM	A59060
Barium	0.074	0.00065	0.0020		mg/L	1	4/10/2019 5:05:33 PM	A59060
Beryllium	0.00032	0.00028	0.0020	J	mg/L	1	4/10/2019 5:05:33 PM	A59060
Boron	0.52	0.0045	0.040		mg/L	1	4/10/2019 5:05:33 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:05:33 PM	A59060
Calcium	74	0.062	1.0		mg/L	1	4/10/2019 5:05:33 PM	A59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:05:33 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:05:33 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:05:33 PM	A59060
Iron	0.11	0.0087	0.020		mg/L	1	4/10/2019 5:05:33 PM	A59060
Magnesium	16	0.050	1.0		mg/L	1	4/10/2019 5:05:33 PM	A59060
Manganese	0.37	0.00029	0.0020	*	mg/L	1	4/10/2019 5:05:33 PM	A59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:05:33 PM	A59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 5:05:33 PM	A59060
Potassium	1.0	0.16	1.0		mg/L	1	4/10/2019 5:05:33 PM	A59060
Silver	0.0012	0.00094	0.0050	J	mg/L	1	4/10/2019 5:05:33 PM	A59060
Sodium	290	2.1	5.0		mg/L	5	4/5/2019 4:41:34 PM	A58959
Zinc	0.038	0.0023	0.010		mg/L	1	4/10/2019 5:05:33 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	1.9	0.046	0.20	*	mg/L	10	4/1/2019 4:56:57 PM	43970
Barium	0.099	0.00065	0.0020		mg/L	1	4/1/2019 4:54:56 PM	43970
Beryllium	ND	0.00028	0.0020		mg/L	1	4/1/2019 4:54:56 PM	43970
Boron	0.53	0.0045	0.040		mg/L	1	4/1/2019 4:54:56 PM	43970

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:06:00 AM
Lab ID: 1903C58-005
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 4:54:56 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 4:54:56 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 4:54:56 PM	43970
Copper	0.0041	0.0041	0.0060	J	mg/L	1	4/1/2019 4:54:56 PM	43970
Iron	0.88	0.0087	0.020	*	mg/L	1	4/1/2019 4:54:56 PM	43970
Manganese	0.40	0.00029	0.0020	*	mg/L	1	4/1/2019 4:54:56 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 4:54:56 PM	43970
Nickel	0.0079	0.0040	0.010	J	mg/L	1	4/1/2019 4:54:56 PM	43970
Silver	0.0017	0.0014	0.0050	J	mg/L	1	4/1/2019 4:54:56 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 4:54:56 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:02:13 PM	D58733
Arsenic	0.00063	0.00010	0.0010	J	mg/L	1	3/28/2019 8:02:13 PM	D58733
Lead	0.000072	0.000055	0.00050	J	mg/L	1	3/28/2019 8:02:13 PM	D58733
Selenium	ND	0.00017	0.0010		mg/L	1	3/28/2019 8:02:13 PM	D58733
Thallium	0.000049	0.000048	0.00050	J	mg/L	1	3/28/2019 8:02:13 PM	D58733
Uranium	0.034	0.00037	0.0025	*	mg/L	5	4/10/2019 7:13:05 PM	A59066
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:15:33 PM	43970
Arsenic	0.00072	0.00031	0.0010	J	mg/L	1	4/1/2019 3:15:33 PM	43970
Lead	0.00085	0.000055	0.00050		mg/L	1	4/1/2019 3:15:33 PM	43970
Selenium	0.00054	0.00048	0.0010	J	mg/L	1	4/1/2019 3:15:33 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:15:33 PM	43970
Uranium	0.036	0.00042	0.0025	*	mg/L	5	4/9/2019 5:19:31 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000092	0.000038	0.00020	J	mg/L	1	4/9/2019 12:55:23 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 4:25:32 PM	43941

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:06:00 AM
Lab ID: 1903C58-005
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	8.0	6.3	20	J	µg/L	1	4/8/2019 4:25:32 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 4:25:32 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 4:25:32 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 4:25:32 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 4:25:32 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 4:25:32 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 4:25:32 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 4:25:32 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 4:25:32 PM	43941

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:06:00 AM
Lab ID: 1903C58-005
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 4:25:32 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 4:25:32 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 4:25:32 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 4:25:32 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Naphthalene	ND	5.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 4:25:32 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 4:25:32 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Phenol	ND	6.0	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 4:25:32 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 4:25:32 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 4:25:32 PM	43941
Surr: 2-Fluorophenol	58.4	0	15-101		%Rec	1	4/8/2019 4:25:32 PM	43941
Surr: Phenol-d5	44.6	0	15-84.6		%Rec	1	4/8/2019 4:25:32 PM	43941
Surr: 2,4,6-Tribromophenol	82.8	0	27.8-112		%Rec	1	4/8/2019 4:25:32 PM	43941
Surr: Nitrobenzene-d5	76.8	0	33-113		%Rec	1	4/8/2019 4:25:32 PM	43941
Surr: 2-Fluorobiphenyl	62.6	0	26.6-107		%Rec	1	4/8/2019 4:25:32 PM	43941
Surr: 4-Terphenyl-d14	77.6	0	18.7-148		%Rec	1	4/8/2019 4:25:32 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.83	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Toluene	ND	1.8	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Ethylbenzene	ND	0.66	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Methyl tert-butyl ether (MTBE)	500	2.3	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2,4-Trimethylbenzene	ND	1.1	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Naphthalene	ND	1.4	10		µg/L	5	4/1/2019 9:01:31 PM	R58813
1-Methylnaphthalene	ND	1.6	20		µg/L	5	4/1/2019 9:01:31 PM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:06:00 AM
Lab ID: 1903C58-005
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	1.7	20		µg/L	5	4/1/2019 9:01:31 PM	R58813
Acetone	ND	6.0	50		µg/L	5	4/1/2019 9:01:31 PM	R58813
Bromobenzene	ND	1.2	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Bromodichloromethane	ND	0.67	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Bromoform	ND	1.4	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Bromomethane	ND	1.4	15		µg/L	5	4/1/2019 9:01:31 PM	R58813
2-Butanone	ND	10	50		µg/L	5	4/1/2019 9:01:31 PM	R58813
Carbon disulfide	ND	2.3	50		µg/L	5	4/1/2019 9:01:31 PM	R58813
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Chlorobenzene	ND	0.97	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Chloroethane	ND	0.89	10		µg/L	5	4/1/2019 9:01:31 PM	R58813
Chloroform	ND	0.61	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Chloromethane	ND	1.6	15		µg/L	5	4/1/2019 9:01:31 PM	R58813
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	4/1/2019 9:01:31 PM	R58813
Dibromochloromethane	ND	1.2	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Dibromomethane	ND	1.0	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
2,2-Dichloropropane	ND	1.2	10		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
2-Hexanone	ND	7.7	50		µg/L	5	4/1/2019 9:01:31 PM	R58813
Isopropylbenzene	ND	0.96	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	4/1/2019 9:01:31 PM	R58813
Methylene Chloride	ND	0.77	15		µg/L	5	4/1/2019 9:01:31 PM	R58813
n-Butylbenzene	ND	1.1	15		µg/L	5	4/1/2019 9:01:31 PM	R58813
n-Propylbenzene	ND	1.1	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:06:00 AM
Lab ID: 1903C58-005 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.96	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	4/1/2019 9:01:31 PM	R58813
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	4/1/2019 9:01:31 PM	R58813
Vinyl chloride	ND	0.90	5.0		µg/L	5	4/1/2019 9:01:31 PM	R58813
Xylenes, Total	ND	2.3	7.5		µg/L	5	4/1/2019 9:01:31 PM	R58813
Surr: 1,2-Dichloroethane-d4	84.6	0	70-130		%Rec	5	4/1/2019 9:01:31 PM	R58813
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	5	4/1/2019 9:01:31 PM	R58813
Surr: Dibromofluoromethane	82.6	0	70-130		%Rec	5	4/1/2019 9:01:31 PM	R58813
Surr: Toluene-d8	98.6	0	70-130		%Rec	5	4/1/2019 9:01:31 PM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.46	0.15	0.25		mg/L	5	4/1/2019 9:01:31 PM	G58813
Surr: BFB	102	0	70-130		%Rec	5	4/1/2019 9:01:31 PM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:28:00 AM
Lab ID: 1903C58-006 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.9	0.35	1.0		mg/L	1	3/29/2019 7:06:52 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 7:06:52 PM	43943
Surr: DNOP	113	0	70-130		%Rec	1	3/29/2019 7:06:52 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.38	0.25	0.50	J	mg/L	5	3/27/2019 2:56:49 PM	R58708
Chloride	150	10	10		mg/L	20	3/27/2019 3:09:41 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 2:56:49 PM	R58708
Bromide	1.2	0.068	0.50		mg/L	5	3/27/2019 2:56:49 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 2:56:49 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 2:56:49 PM	R58708
Sulfate	7.6	0.32	2.5		mg/L	5	3/27/2019 2:56:49 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:07:42 PM	A59060
Barium	1.3	0.0032	0.010		mg/L	5	4/5/2019 4:48:16 PM	A58959
Beryllium	0.00036	0.00028	0.0020	J	mg/L	1	4/10/2019 5:07:42 PM	A59060
Boron	0.40	0.0045	0.040		mg/L	1	4/10/2019 5:07:42 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:07:42 PM	A59060
Calcium	140	0.31	5.0		mg/L	5	4/5/2019 4:48:16 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:07:42 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:07:42 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:07:42 PM	A59060
Iron	2.3	0.044	0.10	*	mg/L	5	4/5/2019 4:48:16 PM	A58959
Magnesium	28	0.050	1.0		mg/L	1	4/10/2019 5:07:42 PM	A59060
Manganese	2.5	0.0014	0.010	*	mg/L	5	4/5/2019 4:48:16 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:07:42 PM	A59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 5:07:42 PM	A59060
Potassium	0.84	0.16	1.0	J	mg/L	1	4/10/2019 5:07:42 PM	A59060
Silver	0.0019	0.00094	0.0050	J	mg/L	1	4/10/2019 5:07:42 PM	A59060
Sodium	280	2.1	5.0		mg/L	5	4/5/2019 4:48:16 PM	A58959
Zinc	0.021	0.0023	0.010		mg/L	1	4/10/2019 5:07:42 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	8.6	0.091	0.40	*	mg/L	20	4/1/2019 5:12:00 PM	43970
Barium	1.5	0.0032	0.010		mg/L	5	4/1/2019 5:01:14 PM	43970
Beryllium	0.00049	0.00028	0.0020	J	mg/L	1	4/1/2019 4:59:12 PM	43970
Boron	0.42	0.0045	0.040		mg/L	1	4/1/2019 4:59:12 PM	43970
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 4:59:12 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 4:59:12 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 4:59:12 PM	43970

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:28:00 AM
Lab ID: 1903C58-006
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	0.0085	0.0041	0.0060		mg/L	1	4/1/2019 4:59:12 PM	43970
Iron	8.7	0.17	0.40	*	mg/L	20	4/1/2019 5:12:00 PM	43970
Manganese	2.6	0.0014	0.010	*	mg/L	5	4/1/2019 5:01:14 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 4:59:12 PM	43970
Nickel	0.013	0.0040	0.010		mg/L	1	4/1/2019 4:59:12 PM	43970
Silver	0.0014	0.0014	0.0050	J	mg/L	1	4/1/2019 4:59:12 PM	43970
Zinc	0.018	0.0058	0.010		mg/L	1	4/1/2019 4:59:12 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:10:02 PM	D58733
Arsenic	0.0012	0.00010	0.0010		mg/L	1	3/28/2019 8:10:02 PM	D58733
Lead	0.000067	0.000055	0.00050	J	mg/L	1	3/28/2019 8:10:02 PM	D58733
Selenium	0.00020	0.00017	0.0010	J	mg/L	1	3/28/2019 8:10:02 PM	D58733
Thallium	0.000063	0.000048	0.00050	J	mg/L	1	3/28/2019 8:10:02 PM	D58733
Uranium	0.0022	0.000075	0.00050		mg/L	1	4/4/2019 9:26:13 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:17:40 PM	43970
Arsenic	0.0020	0.00031	0.0010		mg/L	1	4/1/2019 3:17:40 PM	43970
Lead	0.0052	0.000055	0.00050		mg/L	1	4/1/2019 3:17:40 PM	43970
Selenium	0.0015	0.00048	0.0010		mg/L	1	4/1/2019 3:17:40 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:17:40 PM	43970
Uranium	0.0024	0.000085	0.00050		mg/L	1	4/1/2019 3:17:40 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000076	0.000038	0.00020	J	mg/L	1	4/9/2019 12:57:37 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 4:55:10 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 4:55:10 PM	43941

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Collection Date: 3/26/2019 8:28:00 AM
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Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 4:55:10 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 4:55:10 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 4:55:10 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 4:55:10 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 4:55:10 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 4:55:10 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 4:55:10 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 4:55:10 PM	43941
1-Methylnaphthalene	22	7.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 4:55:10 PM	43941

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Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:28:00 AM
Lab ID: 1903C58-006
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 4:55:10 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 4:55:10 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 4:55:10 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Naphthalene	ND	5.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 4:55:10 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 4:55:10 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Phenol	19	6.0	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 4:55:10 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 4:55:10 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 4:55:10 PM	43941
Surr: 2-Fluorophenol	41.4	0	15-101		%Rec	1	4/8/2019 4:55:10 PM	43941
Surr: Phenol-d5	31.5	0	15-84.6		%Rec	1	4/8/2019 4:55:10 PM	43941
Surr: 2,4,6-Tribromophenol	54.0	0	27.8-112		%Rec	1	4/8/2019 4:55:10 PM	43941
Surr: Nitrobenzene-d5	56.5	0	33-113		%Rec	1	4/8/2019 4:55:10 PM	43941
Surr: 2-Fluorobiphenyl	41.9	0	26.6-107		%Rec	1	4/8/2019 4:55:10 PM	43941
Surr: 4-Terphenyl-d14	49.2	0	18.7-148		%Rec	1	4/8/2019 4:55:10 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2400	33	200		µg/L	200	4/1/2019 9:30:04 PM	R58813
Toluene	ND	7.0	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Ethylbenzene	190	2.6	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Methyl tert-butyl ether (MTBE)	4100	91	200		µg/L	200	4/1/2019 9:30:04 PM	R58813
1,2,4-Trimethylbenzene	5.1	4.3	20	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Naphthalene	8.8	5.5	40	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
1-Methylnaphthalene	38	6.3	80	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
2-Methylnaphthalene	ND	6.9	80		µg/L	20	4/1/2019 9:58:35 PM	R58813
Acetone	ND	24	200		µg/L	20	4/1/2019 9:58:35 PM	R58813
Bromobenzene	ND	4.9	20		µg/L	20	4/1/2019 9:58:35 PM	R58813

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	2.7	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Bromoform	ND	5.8	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Bromomethane	ND	5.5	60		µg/L	20	4/1/2019 9:58:35 PM	R58813
2-Butanone	ND	42	200		µg/L	20	4/1/2019 9:58:35 PM	R58813
Carbon disulfide	ND	9.1	200		µg/L	20	4/1/2019 9:58:35 PM	R58813
Carbon Tetrachloride	ND	2.8	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Chlorobenzene	ND	3.9	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Chloroethane	ND	3.6	40		µg/L	20	4/1/2019 9:58:35 PM	R58813
Chloroform	ND	2.4	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Chloromethane	ND	6.4	60		µg/L	20	4/1/2019 9:58:35 PM	R58813
2-Chlorotoluene	ND	4.9	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
4-Chlorotoluene	ND	4.7	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
cis-1,2-DCE	9.8	3.8	20	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	4/1/2019 9:58:35 PM	R58813
Dibromochloromethane	ND	4.8	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Dibromomethane	ND	4.2	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,1-Dichloroethane	10	2.8	20	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
1,1-Dichloroethene	14	4.1	20	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2-Dichloropropane	ND	4.2	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,3-Dichloropropane	ND	4.0	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
2,2-Dichloropropane	ND	4.7	40		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,1-Dichloropropene	ND	3.3	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Hexachlorobutadiene	ND	6.2	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
2-Hexanone	ND	31	200		µg/L	20	4/1/2019 9:58:35 PM	R58813
Isopropylbenzene	6.5	3.8	20	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
4-Isopropyltoluene	ND	4.3	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
4-Methyl-2-pentanone	ND	14	200		µg/L	20	4/1/2019 9:58:35 PM	R58813
Methylene Chloride	ND	3.1	60		µg/L	20	4/1/2019 9:58:35 PM	R58813
n-Butylbenzene	ND	4.6	60		µg/L	20	4/1/2019 9:58:35 PM	R58813
n-Propylbenzene	16	4.3	20	J	µg/L	20	4/1/2019 9:58:35 PM	R58813
sec-Butylbenzene	ND	5.0	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Styrene	ND	3.8	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
tert-Butylbenzene	ND	4.1	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	4/1/2019 9:58:35 PM	R58813

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:28:00 AM
Lab ID: 1903C58-006 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	4/1/2019 9:58:35 PM	R58813
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
trans-1,2-DCE	ND	3.6	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Trichlorofluoromethane	ND	3.8	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	4/1/2019 9:58:35 PM	R58813
Vinyl chloride	ND	3.6	20		µg/L	20	4/1/2019 9:58:35 PM	R58813
Xylenes, Total	ND	9.1	30		µg/L	20	4/1/2019 9:58:35 PM	R58813
Surr: 1,2-Dichloroethane-d4	87.2	0	70-130		%Rec	20	4/1/2019 9:58:35 PM	R58813
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	20	4/1/2019 9:58:35 PM	R58813
Surr: Dibromofluoromethane	83.9	0	70-130		%Rec	20	4/1/2019 9:58:35 PM	R58813
Surr: Toluene-d8	98.4	0	70-130		%Rec	20	4/1/2019 9:58:35 PM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	10	0.61	1.0		mg/L	20	4/1/2019 9:58:35 PM	G58813
Surr: BFB	102	0	70-130		%Rec	20	4/1/2019 9:58:35 PM	G58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-23
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-007
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	4/1/2019 1:13:40 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	15	0.35	1.0		mg/L	1	3/29/2019 7:31:17 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 7:31:17 PM	43943
Surr: DNOP	111	0	70-130		%Rec	1	3/29/2019 7:31:17 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	3/27/2019 3:22:33 PM	R58708
Chloride	390	25	25		mg/L	50	4/6/2019 3:28:05 PM	R58976
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 3:22:33 PM	R58708
Bromide	1.1	0.068	0.50		mg/L	5	3/27/2019 3:22:33 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 3:22:33 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 3:22:33 PM	R58708
Sulfate	2.6	0.32	2.5		mg/L	5	3/27/2019 3:22:33 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:09:42 PM	A59060
Barium	1.4	0.0032	0.010		mg/L	5	4/5/2019 4:55:17 PM	A58959
Beryllium	0.00033	0.00028	0.0020	J	mg/L	1	4/10/2019 5:09:42 PM	A59060
Boron	0.45	0.0045	0.040		mg/L	1	4/10/2019 5:09:42 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:09:42 PM	A59060
Calcium	82	0.062	1.0		mg/L	1	4/10/2019 5:09:42 PM	A59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:09:42 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:09:42 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:09:42 PM	A59060
Iron	0.21	0.0087	0.020		mg/L	1	4/10/2019 5:09:42 PM	A59060
Magnesium	16	0.050	1.0		mg/L	1	4/10/2019 5:09:42 PM	A59060
Manganese	2.0	0.0014	0.010	*	mg/L	5	4/5/2019 4:55:17 PM	A58959
Molybdenum	0.010	0.0067	0.0080		mg/L	1	4/10/2019 5:09:42 PM	A59060
Nickel	0.020	0.0040	0.010		mg/L	1	4/10/2019 5:09:42 PM	A59060
Potassium	0.82	0.16	1.0	J	mg/L	1	4/10/2019 5:09:42 PM	A59060
Silver	0.0015	0.00094	0.0050	J	mg/L	1	4/10/2019 5:09:42 PM	A59060
Sodium	500	4.2	10		mg/L	10	4/5/2019 5:04:26 PM	A58959
Zinc	0.041	0.0023	0.010		mg/L	1	4/10/2019 5:09:42 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.17	0.0046	0.020		mg/L	1	4/1/2019 5:14:19 PM	43970
Barium	1.5	0.0032	0.010		mg/L	5	4/1/2019 5:16:32 PM	43970
Beryllium	ND	0.00028	0.0020		mg/L	1	4/1/2019 5:14:19 PM	43970
Boron	0.43	0.0045	0.040		mg/L	1	4/1/2019 5:14:19 PM	43970

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-23
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-007
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:14:19 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:14:19 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:14:19 PM	43970
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:14:19 PM	43970
Iron	0.64	0.0087	0.020	*	mg/L	1	4/1/2019 5:14:19 PM	43970
Manganese	2.0	0.0014	0.010	*	mg/L	5	4/1/2019 5:16:32 PM	43970
Molybdenum	0.0096	0.0067	0.0080		mg/L	1	4/1/2019 5:14:19 PM	43970
Nickel	0.022	0.0040	0.010		mg/L	1	4/1/2019 5:14:19 PM	43970
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 5:14:19 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 5:14:19 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00043	0.00039	0.0010	J	mg/L	1	3/28/2019 8:12:40 PM	D58733
Arsenic	0.0055	0.00010	0.0010		mg/L	1	3/28/2019 8:12:40 PM	D58733
Lead	0.00063	0.000055	0.00050		mg/L	1	3/28/2019 8:12:40 PM	D58733
Selenium	0.00036	0.00017	0.0010	J	mg/L	1	3/28/2019 8:12:40 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:12:40 PM	D58733
Uranium	0.0082	0.000075	0.00050		mg/L	1	4/4/2019 9:28:50 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00040	0.00039	0.0010	J	mg/L	1	4/1/2019 3:24:04 PM	43970
Arsenic	0.0063	0.00031	0.0010		mg/L	1	4/1/2019 3:24:04 PM	43970
Lead	0.0017	0.000055	0.00050		mg/L	1	4/1/2019 3:24:04 PM	43970
Selenium	0.00055	0.00048	0.0010	J	mg/L	1	4/1/2019 3:24:04 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:24:04 PM	43970
Uranium	0.010	0.000085	0.00050		mg/L	1	4/1/2019 3:24:04 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000080	0.000038	0.00020	J	mg/L	1	4/9/2019 12:59:52 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 5:24:54 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-23
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-007
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 5:24:54 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 5:24:54 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 5:24:54 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 5:24:54 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 5:24:54 PM	43941
2,4-Dimethylphenol	15	5.9	10		µg/L	1	4/8/2019 5:24:54 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 5:24:54 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 5:24:54 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 5:24:54 PM	43941

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-23
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-007
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	53	7.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2-Methylnaphthalene	62	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2-Methylphenol	26	6.3	10		µg/L	1	4/8/2019 5:24:54 PM	43941
3+4-Methylphenol	26	5.4	10		µg/L	1	4/8/2019 5:24:54 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 5:24:54 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 5:24:54 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Naphthalene	150	5.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 5:24:54 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 5:24:54 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Phenol	6.8	6.0	10	J	µg/L	1	4/8/2019 5:24:54 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 5:24:54 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 5:24:54 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 5:24:54 PM	43941
Surr: 2-Fluorophenol	34.9	0	15-101		%Rec	1	4/8/2019 5:24:54 PM	43941
Surr: Phenol-d5	21.8	0	15-84.6		%Rec	1	4/8/2019 5:24:54 PM	43941
Surr: 2,4,6-Tribromophenol	60.6	0	27.8-112		%Rec	1	4/8/2019 5:24:54 PM	43941
Surr: Nitrobenzene-d5	55.6	0	33-113		%Rec	1	4/8/2019 5:24:54 PM	43941
Surr: 2-Fluorobiphenyl	43.0	0	26.6-107		%Rec	1	4/8/2019 5:24:54 PM	43941
Surr: 4-Terphenyl-d14	46.8	0	18.7-148		%Rec	1	4/8/2019 5:24:54 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3600	17	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Toluene	8400	35	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Ethylbenzene	990	13	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Methyl tert-butyl ether (MTBE)	480	46	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2,4-Trimethylbenzene	1100	21	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,3,5-Trimethylbenzene	330	19	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2-Dibromoethane (EDB)	ND	17	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Naphthalene	250	28	200		µg/L	100	4/1/2019 10:55:38 PM	R58813
1-Methylnaphthalene	94	31	400	J	µg/L	100	4/1/2019 10:55:38 PM	R58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-23
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-007
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	110	35	400	J	µg/L	100	4/1/2019 10:55:38 PM	R58813
Acetone	ND	120	1000		µg/L	100	4/1/2019 10:55:38 PM	R58813
Bromobenzene	ND	24	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Bromodichloromethane	ND	13	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Bromoform	ND	29	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Bromomethane	ND	27	300		µg/L	100	4/1/2019 10:55:38 PM	R58813
2-Butanone	ND	210	1000		µg/L	100	4/1/2019 10:55:38 PM	R58813
Carbon disulfide	ND	45	1000		µg/L	100	4/1/2019 10:55:38 PM	R58813
Carbon Tetrachloride	ND	14	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Chlorobenzene	ND	19	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Chloroethane	ND	18	200		µg/L	100	4/1/2019 10:55:38 PM	R58813
Chloroform	ND	12	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Chloromethane	ND	32	300		µg/L	100	4/1/2019 10:55:38 PM	R58813
2-Chlorotoluene	ND	25	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
4-Chlorotoluene	ND	23	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
cis-1,2-DCE	24	19	100	J	µg/L	100	4/1/2019 10:55:38 PM	R58813
cis-1,3-Dichloropropene	ND	14	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2-Dibromo-3-chloropropane	ND	33	200		µg/L	100	4/1/2019 10:55:38 PM	R58813
Dibromochloromethane	ND	24	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Dibromomethane	ND	21	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2-Dichlorobenzene	ND	30	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,3-Dichlorobenzene	ND	25	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,4-Dichlorobenzene	ND	29	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Dichlorodifluoromethane	ND	26	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,1-Dichloroethane	50	14	100	J	µg/L	100	4/1/2019 10:55:38 PM	R58813
1,1-Dichloroethene	37	21	100	J	µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2-Dichloropropane	ND	21	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,3-Dichloropropane	ND	20	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
2,2-Dichloropropane	ND	23	200		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,1-Dichloropropene	ND	16	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Hexachlorobutadiene	ND	31	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
2-Hexanone	ND	150	1000		µg/L	100	4/1/2019 10:55:38 PM	R58813
Isopropylbenzene	28	19	100	J	µg/L	100	4/1/2019 10:55:38 PM	R58813
4-Isopropyltoluene	ND	22	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	4/1/2019 10:55:38 PM	R58813
Methylene Chloride	ND	15	300		µg/L	100	4/1/2019 10:55:38 PM	R58813
n-Butylbenzene	ND	23	300		µg/L	100	4/1/2019 10:55:38 PM	R58813
n-Propylbenzene	81	21	100	J	µg/L	100	4/1/2019 10:55:38 PM	R58813
sec-Butylbenzene	ND	25	100		µg/L	100	4/1/2019 10:55:38 PM	R58813

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-007
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	19	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
tert-Butylbenzene	ND	21	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,1,1,2-Tetrachloroethane	ND	21	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,1,2,2-Tetrachloroethane	ND	55	200		µg/L	100	4/1/2019 10:55:38 PM	R58813
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
trans-1,2-DCE	ND	18	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
trans-1,3-Dichloropropene	ND	17	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2,3-Trichlorobenzene	ND	30	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2,4-Trichlorobenzene	ND	20	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,1,1-Trichloroethane	ND	17	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,1,2-Trichloroethane	ND	22	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Trichloroethene (TCE)	ND	17	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
Trichlorofluoromethane	ND	19	100		µg/L	100	4/1/2019 10:55:38 PM	R58813
1,2,3-Trichloropropane	ND	30	200		µg/L	100	4/1/2019 10:55:38 PM	R58813
Vinyl chloride	48	18	100	J	µg/L	100	4/1/2019 10:55:38 PM	R58813
Xylenes, Total	7400	45	150		µg/L	100	4/1/2019 10:55:38 PM	R58813
Surr: 1,2-Dichloroethane-d4	84.6	0	70-130		%Rec	100	4/1/2019 10:55:38 PM	R58813
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	100	4/1/2019 10:55:38 PM	R58813
Surr: Dibromofluoromethane	80.5	0	70-130		%Rec	100	4/1/2019 10:55:38 PM	R58813
Surr: Toluene-d8	97.2	0	70-130		%Rec	100	4/1/2019 10:55:38 PM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	60	3.1	5.0		mg/L	100	4/1/2019 10:55:38 PM	G58813
Surr: BFB	99.0	0	70-130		%Rec	100	4/1/2019 10:55:38 PM	G58813

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: DUPLICATE
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Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-008
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/1/2019 1:28:35 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1400	18	50		mg/L	50	4/1/2019 12:49:50 PM	43943
Motor Oil Range Organics (MRO)	ND	250	250		mg/L	50	4/1/2019 12:49:50 PM	43943
Surr: DNOP	0	0	70-130	S	%Rec	50	4/1/2019 12:49:50 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	3/27/2019 4:13:59 PM	R58708
Chloride	400	25	25		mg/L	50	4/6/2019 3:40:56 PM	R58976
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 4:13:59 PM	R58708
Bromide	1.1	0.068	0.50		mg/L	5	3/27/2019 4:13:59 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 4:13:59 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 4:13:59 PM	R58708
Sulfate	2.1	0.32	2.5	J	mg/L	5	3/27/2019 4:13:59 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:11:53 PM	A59060
Barium	1.6	0.0032	0.010		mg/L	5	4/5/2019 5:08:54 PM	A58959
Beryllium	0.00040	0.00028	0.0020	J	mg/L	1	4/10/2019 5:11:53 PM	A59060
Boron	0.43	0.0045	0.040		mg/L	1	4/10/2019 5:11:53 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:11:53 PM	A59060
Calcium	82	0.062	1.0		mg/L	1	4/10/2019 5:11:53 PM	A59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:11:53 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:11:53 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:11:53 PM	A59060
Iron	0.22	0.0087	0.020		mg/L	1	4/10/2019 5:11:53 PM	A59060
Magnesium	16	0.050	1.0		mg/L	1	4/10/2019 5:11:53 PM	A59060
Manganese	2.0	0.0014	0.010	*	mg/L	5	4/5/2019 5:08:54 PM	A58959
Molybdenum	0.011	0.0067	0.0080		mg/L	1	4/10/2019 5:11:53 PM	A59060
Nickel	0.018	0.0040	0.010		mg/L	1	4/10/2019 5:11:53 PM	A59060
Potassium	0.84	0.16	1.0	J	mg/L	1	4/10/2019 5:11:53 PM	A59060
Silver	0.0015	0.00094	0.0050	J	mg/L	1	4/10/2019 5:11:53 PM	A59060
Sodium	510	4.2	10		mg/L	10	4/5/2019 5:11:09 PM	A58959
Zinc	0.034	0.0023	0.010		mg/L	1	4/10/2019 5:11:53 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.088	0.0046	0.020		mg/L	1	4/1/2019 5:18:53 PM	43970
Barium	1.5	0.0032	0.010		mg/L	5	4/1/2019 5:21:06 PM	43970
Beryllium	ND	0.00028	0.0020		mg/L	1	4/1/2019 5:18:53 PM	43970
Boron	0.44	0.0045	0.040		mg/L	1	4/1/2019 5:18:53 PM	43970

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Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-008
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:18:53 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:18:53 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:18:53 PM	43970
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:18:53 PM	43970
Iron	0.60	0.0087	0.020	*	mg/L	1	4/1/2019 5:18:53 PM	43970
Manganese	2.0	0.0014	0.010	*	mg/L	5	4/1/2019 5:21:06 PM	43970
Molybdenum	0.0099	0.0067	0.0080		mg/L	1	4/1/2019 5:18:53 PM	43970
Nickel	0.022	0.0040	0.010		mg/L	1	4/1/2019 5:18:53 PM	43970
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 5:18:53 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 5:18:53 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00044	0.00039	0.0010	J	mg/L	1	3/28/2019 8:15:17 PM	D58733
Arsenic	0.0053	0.00010	0.0010		mg/L	1	3/28/2019 8:15:17 PM	D58733
Lead	0.0010	0.000055	0.00050		mg/L	1	3/28/2019 8:15:17 PM	D58733
Selenium	0.00031	0.00017	0.0010	J	mg/L	1	3/28/2019 8:15:17 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:15:17 PM	D58733
Uranium	0.014	0.000075	0.00050		mg/L	1	4/4/2019 9:31:28 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:26:10 PM	43970
Arsenic	0.0064	0.00031	0.0010		mg/L	1	4/1/2019 3:26:10 PM	43970
Lead	0.0015	0.000055	0.00050		mg/L	1	4/1/2019 3:26:10 PM	43970
Selenium	ND	0.00048	0.0010		mg/L	1	4/1/2019 3:26:10 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:26:10 PM	43970
Uranium	0.010	0.000085	0.00050		mg/L	1	4/1/2019 3:26:10 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000073	0.000038	0.00020	J	mg/L	1	4/9/2019 1:02:07 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 5:54:37 PM	43941

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Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 5:54:37 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 5:54:37 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 5:54:37 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 5:54:37 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 5:54:37 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 5:54:37 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 5:54:37 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 5:54:37 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 5:54:37 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Fluorene	30	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 5:54:37 PM	43941

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-008
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	650	35	50		µg/L	5	4/12/2019 2:49:36 PM	43941
2-Methylnaphthalene	490	32	50		µg/L	5	4/12/2019 2:49:36 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 5:54:37 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 5:54:37 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 5:54:37 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 5:54:37 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Naphthalene	350	25	50		µg/L	5	4/12/2019 2:49:36 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 5:54:37 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 5:54:37 PM	43941
Phenanthrene	47	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Phenol	ND	6.0	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 5:54:37 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 5:54:37 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 5:54:37 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 5:54:37 PM	43941
Surr: 2-Fluorophenol	14.2	0	15-101	S	%Rec	1	4/8/2019 5:54:37 PM	43941
Surr: Phenol-d5	6.08	0	15-84.6	S	%Rec	1	4/8/2019 5:54:37 PM	43941
Surr: 2,4,6-Tribromophenol	26.8	0	27.8-112	S	%Rec	1	4/8/2019 5:54:37 PM	43941
Surr: Nitrobenzene-d5	0	0	33-113	S	%Rec	1	4/8/2019 5:54:37 PM	43941
Surr: 2-Fluorobiphenyl	28.7	0	26.6-107		%Rec	1	4/8/2019 5:54:37 PM	43941
Surr: 4-Terphenyl-d14	30.4	0	18.7-148		%Rec	1	4/8/2019 5:54:37 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3500	17	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Toluene	8400	35	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Ethylbenzene	1100	13	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Methyl tert-butyl ether (MTBE)	450	46	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2,4-Trimethylbenzene	1200	21	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,3,5-Trimethylbenzene	370	19	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2-Dibromoethane (EDB)	ND	17	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Naphthalene	270	28	200		µg/L	100	4/1/2019 11:52:43 PM	R58813
1-Methylnaphthalene	95	31	400	J	µg/L	100	4/1/2019 11:52:43 PM	R58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-008
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	110	35	400	J	µg/L	100	4/1/2019 11:52:43 PM	R58813
Acetone	ND	120	1000		µg/L	100	4/1/2019 11:52:43 PM	R58813
Bromobenzene	ND	24	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Bromodichloromethane	ND	13	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Bromoform	ND	29	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Bromomethane	ND	27	300		µg/L	100	4/1/2019 11:52:43 PM	R58813
2-Butanone	ND	210	1000		µg/L	100	4/1/2019 11:52:43 PM	R58813
Carbon disulfide	ND	45	1000		µg/L	100	4/1/2019 11:52:43 PM	R58813
Carbon Tetrachloride	ND	14	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Chlorobenzene	ND	19	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Chloroethane	ND	18	200		µg/L	100	4/1/2019 11:52:43 PM	R58813
Chloroform	ND	12	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Chloromethane	ND	32	300		µg/L	100	4/1/2019 11:52:43 PM	R58813
2-Chlorotoluene	ND	25	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
4-Chlorotoluene	ND	23	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
cis-1,2-DCE	ND	19	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
cis-1,3-Dichloropropene	ND	14	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2-Dibromo-3-chloropropane	ND	33	200		µg/L	100	4/1/2019 11:52:43 PM	R58813
Dibromochloromethane	ND	24	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Dibromomethane	ND	21	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2-Dichlorobenzene	ND	30	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,3-Dichlorobenzene	ND	25	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,4-Dichlorobenzene	ND	29	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Dichlorodifluoromethane	ND	26	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,1-Dichloroethane	49	14	100	J	µg/L	100	4/1/2019 11:52:43 PM	R58813
1,1-Dichloroethene	36	21	100	J	µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2-Dichloropropane	ND	21	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,3-Dichloropropane	ND	20	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
2,2-Dichloropropane	ND	23	200		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,1-Dichloropropene	ND	16	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Hexachlorobutadiene	ND	31	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
2-Hexanone	ND	150	1000		µg/L	100	4/1/2019 11:52:43 PM	R58813
Isopropylbenzene	37	19	100	J	µg/L	100	4/1/2019 11:52:43 PM	R58813
4-Isopropyltoluene	ND	22	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	4/1/2019 11:52:43 PM	R58813
Methylene Chloride	ND	15	300		µg/L	100	4/1/2019 11:52:43 PM	R58813
n-Butylbenzene	ND	23	300		µg/L	100	4/1/2019 11:52:43 PM	R58813
n-Propylbenzene	120	21	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
sec-Butylbenzene	ND	25	100		µg/L	100	4/1/2019 11:52:43 PM	R58813

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 8:45:00 AM
Lab ID: 1903C58-008 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	19	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
tert-Butylbenzene	ND	21	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,1,1,2-Tetrachloroethane	ND	21	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,1,2,2-Tetrachloroethane	ND	55	200		µg/L	100	4/1/2019 11:52:43 PM	R58813
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
trans-1,2-DCE	ND	18	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
trans-1,3-Dichloropropene	ND	17	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2,3-Trichlorobenzene	ND	30	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2,4-Trichlorobenzene	ND	20	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,1,1-Trichloroethane	ND	17	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,1,2-Trichloroethane	ND	22	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Trichloroethene (TCE)	ND	17	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
Trichlorofluoromethane	ND	19	100		µg/L	100	4/1/2019 11:52:43 PM	R58813
1,2,3-Trichloropropane	ND	30	200		µg/L	100	4/1/2019 11:52:43 PM	R58813
Vinyl chloride	48	18	100	J	µg/L	100	4/1/2019 11:52:43 PM	R58813
Xylenes, Total	7900	45	150		µg/L	100	4/1/2019 11:52:43 PM	R58813
Surr: 1,2-Dichloroethane-d4	87.4	0	70-130		%Rec	100	4/1/2019 11:52:43 PM	R58813
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	100	4/1/2019 11:52:43 PM	R58813
Surr: Dibromofluoromethane	83.4	0	70-130		%Rec	100	4/1/2019 11:52:43 PM	R58813
Surr: Toluene-d8	99.7	0	70-130		%Rec	100	4/1/2019 11:52:43 PM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	63	3.1	5.0		mg/L	100	4/1/2019 11:52:43 PM	G58813
Surr: BFB	101	0	70-130		%Rec	100	4/1/2019 11:52:43 PM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 9:22:00 AM
Lab ID: 1903C58-009
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	4/1/2019 1:43:31 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	3/29/2019 8:19:57 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 8:19:57 PM	43943
Surr: DNOP	110	0	70-130		%Rec	1	3/29/2019 8:19:57 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.41	0.25	0.50	J	mg/L	5	3/27/2019 4:39:41 PM	R58708
Chloride	1000	50	50		mg/L	100	4/6/2019 3:53:48 PM	R58976
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 4:39:41 PM	R58708
Bromide	0.25	0.068	0.50	J	mg/L	5	3/27/2019 4:39:41 PM	R58708
Nitrogen, Nitrate (As N)	11	0.14	0.50	*	mg/L	5	3/27/2019 4:39:41 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 4:39:41 PM	R58708
Sulfate	35	0.32	2.5		mg/L	5	3/27/2019 4:39:41 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:14:04 PM	A59060
Barium	0.35	0.00065	0.0020		mg/L	1	4/10/2019 5:14:04 PM	A59060
Beryllium	0.00034	0.00028	0.0020	J	mg/L	1	4/10/2019 5:14:04 PM	A59060
Boron	0.18	0.0045	0.040		mg/L	1	4/10/2019 5:14:04 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:14:04 PM	A59060
Calcium	300	0.31	5.0		mg/L	5	4/5/2019 5:15:49 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:14:04 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:14:04 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:14:04 PM	A59060
Iron	ND	0.0087	0.020		mg/L	1	4/10/2019 5:14:04 PM	A59060
Magnesium	69	0.050	1.0		mg/L	1	4/10/2019 5:14:04 PM	A59060
Manganese	0.00062	0.00029	0.0020	J	mg/L	1	4/10/2019 5:14:04 PM	A59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:14:04 PM	A59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 5:14:04 PM	A59060
Potassium	1.0	0.16	1.0	J	mg/L	1	4/10/2019 5:14:04 PM	A59060
Silver	0.0050	0.00094	0.0050		mg/L	1	4/10/2019 5:14:04 PM	A59060
Sodium	310	2.1	5.0		mg/L	5	4/5/2019 5:15:49 PM	A58959
Zinc	0.032	0.0023	0.010		mg/L	1	4/10/2019 5:14:04 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.40	0.0046	0.020	*	mg/L	1	4/1/2019 5:23:25 PM	43970
Barium	0.35	0.00065	0.0020		mg/L	1	4/1/2019 5:23:25 PM	43970
Beryllium	0.00036	0.00028	0.0020	J	mg/L	1	4/1/2019 5:23:25 PM	43970
Boron	0.19	0.0045	0.040		mg/L	1	4/1/2019 5:23:25 PM	43970

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 9:22:00 AM
Lab ID: 1903C58-009
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:23:25 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:23:25 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:23:25 PM	43970
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:23:25 PM	43970
Iron	0.39	0.0087	0.020	*	mg/L	1	4/1/2019 5:23:25 PM	43970
Manganese	0.011	0.00029	0.0020		mg/L	1	4/1/2019 5:23:25 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 5:23:25 PM	43970
Nickel	ND	0.0040	0.010		mg/L	1	4/1/2019 5:23:25 PM	43970
Silver	0.0039	0.0014	0.0050	J	mg/L	1	4/1/2019 5:23:25 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 5:23:25 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:17:54 PM	D58733
Arsenic	0.00025	0.00010	0.0010	J	mg/L	1	3/28/2019 8:17:54 PM	D58733
Lead	ND	0.000055	0.00050		mg/L	1	3/28/2019 8:17:54 PM	D58733
Selenium	0.00070	0.00017	0.0010	J	mg/L	1	3/28/2019 8:17:54 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:17:54 PM	D58733
Uranium	0.011	0.000075	0.00050		mg/L	1	4/4/2019 9:34:05 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:28:17 PM	43970
Arsenic	0.00045	0.00031	0.0010	J	mg/L	1	4/1/2019 3:28:17 PM	43970
Lead	0.00044	0.00027	0.0025	J	mg/L	5	4/1/2019 4:52:48 PM	43970
Selenium	0.00088	0.00048	0.0010	J	mg/L	1	4/1/2019 3:28:17 PM	43970
Thallium	ND	0.00026	0.0025		mg/L	5	4/1/2019 4:52:48 PM	43970
Uranium	0.012	0.000085	0.00050		mg/L	1	4/9/2019 5:21:38 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000082	0.000038	0.00020	J	mg/L	1	4/9/2019 1:04:23 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 6:24:22 PM	43941

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 9:22:00 AM
Lab ID: 1903C58-009
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 6:24:22 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 6:24:22 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 6:24:22 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 6:24:22 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 6:24:22 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 6:24:22 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 6:24:22 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 6:24:22 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 6:24:22 PM	43941

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 9:22:00 AM
Lab ID: 1903C58-009
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 6:24:22 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 6:24:22 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 6:24:22 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 6:24:22 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Naphthalene	ND	5.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 6:24:22 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 6:24:22 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Phenol	ND	6.0	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 6:24:22 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 6:24:22 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 6:24:22 PM	43941
Surr: 2-Fluorophenol	0.670	0	15-101	S	%Rec	1	4/8/2019 6:24:22 PM	43941
Surr: Phenol-d5	1.79	0	15-84.6	S	%Rec	1	4/8/2019 6:24:22 PM	43941
Surr: 2,4,6-Tribromophenol	0.500	0	27.8-112	S	%Rec	1	4/8/2019 6:24:22 PM	43941
Surr: Nitrobenzene-d5	28.1	0	33-113	S	%Rec	1	4/8/2019 6:24:22 PM	43941
Surr: 2-Fluorobiphenyl	23.9	0	26.6-107	S	%Rec	1	4/8/2019 6:24:22 PM	43941
Surr: 4-Terphenyl-d14	29.1	0	18.7-148		%Rec	1	4/8/2019 6:24:22 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 12:21:22 AM	R58813

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 9:22:00 AM
Lab ID: 1903C58-009
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Acetone	3.6	1.2	10	J	µg/L	1	4/2/2019 12:21:22 AM	R58813
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 12:21:22 AM	R58813
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 12:21:22 AM	R58813
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 12:21:22 AM	R58813
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 12:21:22 AM	R58813
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 9:22:00 AM
Lab ID: 1903C58-009
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Trichloroethene (TCE)	0.20	0.17	1.0	J	µg/L	1	4/2/2019 12:21:22 AM	R58813
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 12:21:22 AM	R58813
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 12:21:22 AM	R58813
Surr: 1,2-Dichloroethane-d4	83.8	0	70-130		%Rec	1	4/2/2019 12:21:22 AM	R58813
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	4/2/2019 12:21:22 AM	R58813
Surr: Dibromofluoromethane	82.3	0	70-130		%Rec	1	4/2/2019 12:21:22 AM	R58813
Surr: Toluene-d8	98.8	0	70-130		%Rec	1	4/2/2019 12:21:22 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 12:21:22 AM	G58813
Surr: BFB	103	0	70-130		%Rec	1	4/2/2019 12:21:22 AM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 10:12:00 AM
Lab ID: 1903C58-010 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.6	0.35	1.0		mg/L	1	3/29/2019 8:44:13 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 8:44:13 PM	43943
Surr: DNOP	110	0	70-130		%Rec	1	3/29/2019 8:44:13 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.1	0.25	0.50		mg/L	5	3/27/2019 5:05:25 PM	R58708
Chloride	390	10	10		mg/L	20	3/27/2019 5:18:16 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 5:05:25 PM	R58708
Bromide	0.67	0.068	0.50		mg/L	5	3/27/2019 5:05:25 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 5:05:25 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 5:05:25 PM	R58708
Sulfate	0.40	0.32	2.5	J	mg/L	5	3/27/2019 5:05:25 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:16:23 PM	A59060
Barium	4.2	0.0032	0.010	*	mg/L	5	4/5/2019 5:22:45 PM	A58959
Beryllium	0.00035	0.00028	0.0020	J	mg/L	1	4/10/2019 5:16:23 PM	A59060
Boron	0.37	0.0045	0.040		mg/L	1	4/10/2019 5:16:23 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:16:23 PM	A59060
Calcium	150	0.31	5.0		mg/L	5	4/5/2019 5:22:45 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:16:23 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:16:23 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:16:23 PM	A59060
Iron	7.0	0.087	0.20	*	mg/L	10	4/5/2019 5:24:58 PM	A58959
Magnesium	34	0.050	1.0		mg/L	1	4/10/2019 5:16:23 PM	A59060
Manganese	3.1	0.0014	0.010	*	mg/L	5	4/5/2019 5:22:45 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:16:23 PM	A59060
Nickel	0.018	0.0040	0.010		mg/L	1	4/10/2019 5:16:23 PM	A59060
Potassium	0.46	0.16	1.0	J	mg/L	1	4/10/2019 5:16:23 PM	A59060
Silver	0.0017	0.00094	0.0050	J	mg/L	1	4/10/2019 5:16:23 PM	A59060
Sodium	280	2.1	5.0		mg/L	5	4/5/2019 5:22:45 PM	A58959
Zinc	0.046	0.0023	0.010		mg/L	1	4/10/2019 5:16:23 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	1.1	0.046	0.20	*	mg/L	10	4/1/2019 5:30:01 PM	43970
Barium	4.3	0.0065	0.020	*	mg/L	10	4/1/2019 5:30:01 PM	43970
Beryllium	0.00032	0.00028	0.0020	J	mg/L	1	4/1/2019 5:28:01 PM	43970
Boron	0.35	0.0045	0.040		mg/L	1	4/1/2019 5:28:01 PM	43970
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:28:01 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:28:01 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:28:01 PM	43970

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 10:12:00 AM
Lab ID: 1903C58-010
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:28:01 PM	43970
Iron	8.9	0.087	0.20	*	mg/L	10	4/1/2019 5:30:01 PM	43970
Manganese	3.1	0.0029	0.020	*	mg/L	10	4/1/2019 5:30:01 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 5:28:01 PM	43970
Nickel	0.016	0.0040	0.010		mg/L	1	4/1/2019 5:28:01 PM	43970
Silver	0.0018	0.0014	0.0050	J	mg/L	1	4/1/2019 5:28:01 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 5:28:01 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:20:31 PM	D58733
Arsenic	0.0037	0.00010	0.0010		mg/L	1	3/28/2019 8:20:31 PM	D58733
Lead	ND	0.000055	0.00050		mg/L	1	3/28/2019 8:20:31 PM	D58733
Selenium	0.00019	0.00017	0.0010	J	mg/L	1	3/28/2019 8:20:31 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:20:31 PM	D58733
Uranium	0.00017	0.000075	0.00050	J	mg/L	1	4/4/2019 9:36:42 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:30:23 PM	43970
Arsenic	0.0053	0.00031	0.0010		mg/L	1	4/1/2019 3:30:23 PM	43970
Lead	0.00067	0.000055	0.00050		mg/L	1	4/1/2019 3:30:23 PM	43970
Selenium	ND	0.00048	0.0010		mg/L	1	4/1/2019 3:30:23 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:30:23 PM	43970
Uranium	0.00017	0.000085	0.00050	J	mg/L	1	4/1/2019 3:30:23 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000078	0.000038	0.00020	J	mg/L	1	4/9/2019 1:06:39 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 6:54:19 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 6:54:19 PM	43941

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Lab ID: 1903C58-010
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 6:54:19 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 6:54:19 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 6:54:19 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 6:54:19 PM	43941
2,4-Dimethylphenol	11	5.9	10		µg/L	1	4/8/2019 6:54:19 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 6:54:19 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 6:54:19 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 6:54:19 PM	43941
1-Methylnaphthalene	39	7.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2-Methylnaphthalene	52	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2-Methylphenol	11	6.3	10		µg/L	1	4/8/2019 6:54:19 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-10
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 10:12:00 AM
Lab ID: 1903C58-010
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	10	5.4	10		µg/L	1	4/8/2019 6:54:19 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 6:54:19 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 6:54:19 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Naphthalene	98	5.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 6:54:19 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 6:54:19 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Phenol	21	6.0	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 6:54:19 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 6:54:19 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 6:54:19 PM	43941
Surr: 2-Fluorophenol	30.3	0	15-101		%Rec	1	4/8/2019 6:54:19 PM	43941
Surr: Phenol-d5	24.1	0	15-84.6		%Rec	1	4/8/2019 6:54:19 PM	43941
Surr: 2,4,6-Tribromophenol	45.4	0	27.8-112		%Rec	1	4/8/2019 6:54:19 PM	43941
Surr: Nitrobenzene-d5	48.7	0	33-113		%Rec	1	4/8/2019 6:54:19 PM	43941
Surr: 2-Fluorobiphenyl	38.0	0	26.6-107		%Rec	1	4/8/2019 6:54:19 PM	43941
Surr: 4-Terphenyl-d14	43.5	0	18.7-148		%Rec	1	4/8/2019 6:54:19 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	5000	17	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Toluene	860	35	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Ethylbenzene	1700	13	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Methyl tert-butyl ether (MTBE)	47	46	100	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2,4-Trimethylbenzene	860	21	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,3,5-Trimethylbenzene	220	19	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2-Dibromoethane (EDB)	ND	17	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Naphthalene	180	28	200	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
1-Methylnaphthalene	67	31	400	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
2-Methylnaphthalene	86	35	400	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
Acetone	ND	120	1000		µg/L	100	4/2/2019 1:18:25 AM	R58813
Bromobenzene	ND	24	100		µg/L	100	4/2/2019 1:18:25 AM	R58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 10:12:00 AM
Lab ID: 1903C58-010
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	13	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Bromoform	ND	29	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Bromomethane	ND	27	300		µg/L	100	4/2/2019 1:18:25 AM	R58813
2-Butanone	ND	210	1000		µg/L	100	4/2/2019 1:18:25 AM	R58813
Carbon disulfide	ND	45	1000		µg/L	100	4/2/2019 1:18:25 AM	R58813
Carbon Tetrachloride	ND	14	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Chlorobenzene	ND	19	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Chloroethane	ND	18	200		µg/L	100	4/2/2019 1:18:25 AM	R58813
Chloroform	ND	12	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Chloromethane	ND	32	300		µg/L	100	4/2/2019 1:18:25 AM	R58813
2-Chlorotoluene	ND	25	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
4-Chlorotoluene	ND	23	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
cis-1,2-DCE	50	19	100	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
cis-1,3-Dichloropropene	ND	14	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2-Dibromo-3-chloropropane	ND	33	200		µg/L	100	4/2/2019 1:18:25 AM	R58813
Dibromochloromethane	ND	24	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Dibromomethane	ND	21	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2-Dichlorobenzene	ND	30	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,3-Dichlorobenzene	ND	25	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,4-Dichlorobenzene	ND	29	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Dichlorodifluoromethane	ND	26	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,1-Dichloroethane	40	14	100	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
1,1-Dichloroethene	ND	21	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2-Dichloropropane	ND	21	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,3-Dichloropropane	ND	20	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
2,2-Dichloropropane	ND	23	200		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,1-Dichloropropene	ND	16	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Hexachlorobutadiene	ND	31	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
2-Hexanone	ND	150	1000		µg/L	100	4/2/2019 1:18:25 AM	R58813
Isopropylbenzene	48	19	100	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
4-Isopropyltoluene	ND	22	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	4/2/2019 1:18:25 AM	R58813
Methylene Chloride	ND	15	300		µg/L	100	4/2/2019 1:18:25 AM	R58813
n-Butylbenzene	ND	23	300		µg/L	100	4/2/2019 1:18:25 AM	R58813
n-Propylbenzene	110	21	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
sec-Butylbenzene	ND	25	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Styrene	ND	19	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
tert-Butylbenzene	ND	21	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,1,1,2-Tetrachloroethane	ND	21	100		µg/L	100	4/2/2019 1:18:25 AM	R58813

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Lab ID: 1903C58-010
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Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	55	200		µg/L	100	4/2/2019 1:18:25 AM	R58813
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
trans-1,2-DCE	ND	18	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
trans-1,3-Dichloropropene	ND	17	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2,3-Trichlorobenzene	ND	30	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2,4-Trichlorobenzene	ND	20	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,1,1-Trichloroethane	ND	17	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,1,2-Trichloroethane	ND	22	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Trichloroethene (TCE)	ND	17	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
Trichlorofluoromethane	ND	19	100		µg/L	100	4/2/2019 1:18:25 AM	R58813
1,2,3-Trichloropropane	ND	30	200		µg/L	100	4/2/2019 1:18:25 AM	R58813
Vinyl chloride	42	18	100	J	µg/L	100	4/2/2019 1:18:25 AM	R58813
Xylenes, Total	7900	45	150		µg/L	100	4/2/2019 1:18:25 AM	R58813
Surr: 1,2-Dichloroethane-d4	85.5	0	70-130		%Rec	100	4/2/2019 1:18:25 AM	R58813
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	100	4/2/2019 1:18:25 AM	R58813
Surr: Dibromofluoromethane	82.1	0	70-130		%Rec	100	4/2/2019 1:18:25 AM	R58813
Surr: Toluene-d8	97.9	0	70-130		%Rec	100	4/2/2019 1:18:25 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	50	3.1	5.0		mg/L	100	4/2/2019 1:18:25 AM	G58813
Surr: BFB	98.8	0	70-130		%Rec	100	4/2/2019 1:18:25 AM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 10:34:00 AM
Lab ID: 1903C58-011
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	4/1/2019 1:58:26 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.0	0.35	1.0		mg/L	1	3/29/2019 9:08:34 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 9:08:34 PM	43943
Surr: DNOP	112	0	70-130		%Rec	1	3/29/2019 9:08:34 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.0	0.25	0.50		mg/L	5	3/27/2019 5:31:07 PM	R58708
Chloride	240	10	10		mg/L	20	3/27/2019 5:43:59 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 5:31:07 PM	R58708
Bromide	2.5	0.068	0.50		mg/L	5	3/27/2019 5:31:07 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 5:31:07 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 5:31:07 PM	R58708
Sulfate	4.7	0.32	2.5		mg/L	5	3/27/2019 5:31:07 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:25:00 PM	A59060
Barium	3.3	0.0032	0.010	*	mg/L	5	4/5/2019 5:36:24 PM	A58959
Beryllium	0.00051	0.00028	0.0020	J	mg/L	1	4/10/2019 5:25:00 PM	A59060
Boron	0.47	0.0045	0.040		mg/L	1	4/10/2019 5:25:00 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:25:00 PM	A59060
Calcium	140	0.31	5.0		mg/L	5	4/5/2019 5:36:24 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:25:00 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:25:00 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:25:00 PM	A59060
Iron	1.8	0.044	0.10	*	mg/L	5	4/5/2019 5:36:24 PM	A58959
Magnesium	32	0.050	1.0		mg/L	1	4/10/2019 5:25:00 PM	A59060
Manganese	1.6	0.0014	0.010	*	mg/L	5	4/5/2019 5:36:24 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:25:00 PM	A59060
Nickel	0.0041	0.0040	0.010	J	mg/L	1	4/10/2019 5:25:00 PM	A59060
Potassium	0.52	0.16	1.0	J	mg/L	1	4/10/2019 5:25:00 PM	A59060
Silver	0.0022	0.00094	0.0050	J	mg/L	1	4/10/2019 5:25:00 PM	A59060
Sodium	340	2.1	5.0		mg/L	5	4/5/2019 5:36:24 PM	A58959
Zinc	0.021	0.0023	0.010		mg/L	1	4/10/2019 5:25:00 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	1.5	0.046	0.20	*	mg/L	10	4/1/2019 5:40:43 PM	43970
Barium	3.4	0.0065	0.020	*	mg/L	10	4/1/2019 5:40:43 PM	43970
Beryllium	0.00054	0.00028	0.0020	J	mg/L	1	4/1/2019 5:32:08 PM	43970
Boron	0.47	0.0045	0.040		mg/L	1	4/1/2019 5:32:08 PM	43970

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Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:32:08 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:32:08 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:32:08 PM	43970
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:32:08 PM	43970
Iron	6.8	0.087	0.20	*	mg/L	10	4/1/2019 5:40:43 PM	43970
Manganese	1.5	0.0029	0.020	*	mg/L	10	4/1/2019 5:40:43 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 5:32:08 PM	43970
Nickel	0.0092	0.0040	0.010	J	mg/L	1	4/1/2019 5:32:08 PM	43970
Silver	0.0015	0.0014	0.0050	J	mg/L	1	4/1/2019 5:32:08 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 5:32:08 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:23:09 PM	D58733
Arsenic	0.0072	0.00010	0.0010		mg/L	1	3/28/2019 8:23:09 PM	D58733
Lead	0.000093	0.000055	0.00050	J	mg/L	1	3/28/2019 8:23:09 PM	D58733
Selenium	0.00033	0.00017	0.0010	J	mg/L	1	3/28/2019 8:23:09 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:23:09 PM	D58733
Uranium	0.0022	0.000075	0.00050		mg/L	1	4/4/2019 9:39:20 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:32:29 PM	43970
Arsenic	0.010	0.00031	0.0010	*	mg/L	1	4/1/2019 3:32:29 PM	43970
Lead	0.00094	0.000055	0.00050		mg/L	1	4/1/2019 3:32:29 PM	43970
Selenium	0.00071	0.00048	0.0010	J	mg/L	1	4/1/2019 3:32:29 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:32:29 PM	43970
Uranium	0.0023	0.000085	0.00050		mg/L	1	4/1/2019 3:32:29 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000057	0.000038	0.00020	J	mg/L	1	4/9/2019 1:08:55 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 7:24:10 PM	43941

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Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 7:24:10 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 7:24:10 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Carbazole	9.0	6.3	10	J	µg/L	1	4/8/2019 7:24:10 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 7:24:10 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 7:24:10 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 7:24:10 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 7:24:10 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 7:24:10 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 7:24:10 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Fluorene	7.4	6.3	10	J	µg/L	1	4/8/2019 7:24:10 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 7:24:10 PM	43941

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Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	110	7.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2-Methylnaphthalene	120	6.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 7:24:10 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 7:24:10 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 7:24:10 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 7:24:10 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Naphthalene	190	5.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 7:24:10 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 7:24:10 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Phenol	6.5	6.0	10	J	µg/L	1	4/8/2019 7:24:10 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 7:24:10 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 7:24:10 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 7:24:10 PM	43941
Surr: 2-Fluorophenol	39.2	0	15-101		%Rec	1	4/8/2019 7:24:10 PM	43941
Surr: Phenol-d5	27.7	0	15-84.6		%Rec	1	4/8/2019 7:24:10 PM	43941
Surr: 2,4,6-Tribromophenol	46.4	0	27.8-112		%Rec	1	4/8/2019 7:24:10 PM	43941
Surr: Nitrobenzene-d5	52.6	0	33-113		%Rec	1	4/8/2019 7:24:10 PM	43941
Surr: 2-Fluorobiphenyl	42.7	0	26.6-107		%Rec	1	4/8/2019 7:24:10 PM	43941
Surr: 4-Terphenyl-d14	53.8	0	18.7-148		%Rec	1	4/8/2019 7:24:10 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	780	8.3	50		µg/L	50	4/2/2019 4:38:05 AM	R58813
Toluene	14	1.8	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Ethylbenzene	620	6.6	50		µg/L	50	4/2/2019 4:38:05 AM	R58813
Methyl tert-butyl ether (MTBE)	1600	23	50		µg/L	50	4/2/2019 4:38:05 AM	R58813
1,2,4-Trimethylbenzene	440	1.1	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,3,5-Trimethylbenzene	93	0.94	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2-Dichloroethane (EDC)	1.9	0.97	5.0	J	µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Naphthalene	360	1.4	10		µg/L	5	4/2/2019 5:06:35 AM	R58813
1-Methylnaphthalene	190	1.6	20		µg/L	5	4/2/2019 5:06:35 AM	R58813

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	170	1.7	20		µg/L	5	4/2/2019 5:06:35 AM	R58813
Acetone	ND	6.0	50		µg/L	5	4/2/2019 5:06:35 AM	R58813
Bromobenzene	ND	1.2	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Bromodichloromethane	ND	0.67	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Bromoform	ND	1.4	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Bromomethane	ND	1.4	15		µg/L	5	4/2/2019 5:06:35 AM	R58813
2-Butanone	ND	10	50		µg/L	5	4/2/2019 5:06:35 AM	R58813
Carbon disulfide	ND	2.3	50		µg/L	5	4/2/2019 5:06:35 AM	R58813
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Chlorobenzene	ND	0.97	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Chloroethane	ND	0.89	10		µg/L	5	4/2/2019 5:06:35 AM	R58813
Chloroform	ND	0.61	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Chloromethane	ND	1.6	15		µg/L	5	4/2/2019 5:06:35 AM	R58813
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	4/2/2019 5:06:35 AM	R58813
Dibromochloromethane	ND	1.2	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Dibromomethane	ND	1.0	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,1-Dichloroethane	4.7	0.70	5.0	J	µg/L	5	4/2/2019 5:06:35 AM	R58813
1,1-Dichloroethene	6.8	1.0	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
2,2-Dichloropropane	ND	1.2	10		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
2-Hexanone	ND	7.7	50		µg/L	5	4/2/2019 5:06:35 AM	R58813
Isopropylbenzene	22	0.96	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
4-Isopropyltoluene	4.4	1.1	5.0	J	µg/L	5	4/2/2019 5:06:35 AM	R58813
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	4/2/2019 5:06:35 AM	R58813
Methylene Chloride	ND	0.77	15		µg/L	5	4/2/2019 5:06:35 AM	R58813
n-Butylbenzene	ND	1.1	15		µg/L	5	4/2/2019 5:06:35 AM	R58813
n-Propylbenzene	46	1.1	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
sec-Butylbenzene	3.3	1.2	5.0	J	µg/L	5	4/2/2019 5:06:35 AM	R58813

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 10:34:00 AM
Lab ID: 1903C58-011 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.96	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	4/2/2019 5:06:35 AM	R58813
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	4/2/2019 5:06:35 AM	R58813
Vinyl chloride	ND	0.90	5.0		µg/L	5	4/2/2019 5:06:35 AM	R58813
Xylenes, Total	740	2.3	7.5		µg/L	5	4/2/2019 5:06:35 AM	R58813
Surr: 1,2-Dichloroethane-d4	88.7	0	70-130		%Rec	5	4/2/2019 5:06:35 AM	R58813
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	5	4/2/2019 5:06:35 AM	R58813
Surr: Dibromofluoromethane	82.5	0	70-130		%Rec	5	4/2/2019 5:06:35 AM	R58813
Surr: Toluene-d8	97.2	0	70-130		%Rec	5	4/2/2019 5:06:35 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	10	0.15	0.25		mg/L	5	4/2/2019 5:06:35 AM	G58813
Surr: BFB	104	0	70-130		%Rec	5	4/2/2019 5:06:35 AM	G58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:00:00 AM
Lab ID: 1903C58-012
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.4	0.35	1.0		mg/L	1	3/29/2019 9:32:51 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 9:32:51 PM	43943
Surr: DNOP	108	0	70-130		%Rec	1	3/29/2019 9:32:51 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	3/27/2019 5:56:50 PM	R58708
Chloride	730	25	25		mg/L	50	4/6/2019 4:06:40 PM	R58976
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 5:56:50 PM	R58708
Bromide	0.98	0.068	0.50		mg/L	5	3/27/2019 5:56:50 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 5:56:50 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 5:56:50 PM	R58708
Sulfate	3.5	0.32	2.5		mg/L	5	3/27/2019 5:56:50 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:27:03 PM	A59060
Barium	2.2	0.0032	0.010	*	mg/L	5	4/5/2019 5:43:20 PM	A58959
Beryllium	0.00050	0.00028	0.0020	J	mg/L	1	4/10/2019 5:27:03 PM	A59060
Boron	0.54	0.0045	0.040		mg/L	1	4/10/2019 5:27:03 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:27:03 PM	A59060
Calcium	120	0.31	5.0		mg/L	5	4/5/2019 5:43:20 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:27:03 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:27:03 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:27:03 PM	A59060
Iron	2.8	0.044	0.10	*	mg/L	5	4/5/2019 5:43:20 PM	A58959
Magnesium	34	0.050	1.0		mg/L	1	4/10/2019 5:27:03 PM	A59060
Manganese	2.4	0.0014	0.010	*	mg/L	5	4/5/2019 5:43:20 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:27:03 PM	A59060
Nickel	0.042	0.0040	0.010		mg/L	1	4/10/2019 5:27:03 PM	A59060
Potassium	0.87	0.16	1.0	J	mg/L	1	4/10/2019 5:27:03 PM	A59060
Silver	0.0015	0.00094	0.0050	J	mg/L	1	4/10/2019 5:27:03 PM	A59060
Sodium	630	4.2	10		mg/L	10	4/5/2019 5:45:32 PM	A58959
Zinc	0.046	0.0023	0.010		mg/L	1	4/10/2019 5:27:03 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.28	0.0046	0.020	*	mg/L	1	4/1/2019 5:42:57 PM	43970
Barium	2.2	0.0032	0.010	*	mg/L	5	4/1/2019 5:44:50 PM	43970
Beryllium	0.00057	0.00028	0.0020	J	mg/L	1	4/1/2019 5:42:57 PM	43970
Boron	0.51	0.0045	0.040		mg/L	1	4/1/2019 5:42:57 PM	43970
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:42:57 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:42:57 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:42:57 PM	43970

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H	Holding times for preparation or analysis exceeded
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RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:00:00 AM
Lab ID: 1903C58-012
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:42:57 PM	43970
Iron	3.8	0.044	0.10	*	mg/L	5	4/1/2019 5:44:50 PM	43970
Manganese	2.3	0.0014	0.010	*	mg/L	5	4/1/2019 5:44:50 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 5:42:57 PM	43970
Nickel	0.038	0.0040	0.010		mg/L	1	4/1/2019 5:42:57 PM	43970
Silver	0.0018	0.0014	0.0050	J	mg/L	1	4/1/2019 5:42:57 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 5:42:57 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:31:04 PM	D58733
Arsenic	0.0085	0.00010	0.0010		mg/L	1	3/28/2019 8:31:04 PM	D58733
Lead	ND	0.000055	0.00050		mg/L	1	3/28/2019 8:31:04 PM	D58733
Selenium	ND	0.00017	0.0010		mg/L	1	3/28/2019 8:31:04 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:31:04 PM	D58733
Uranium	0.0042	0.000075	0.00050		mg/L	1	4/4/2019 9:41:57 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:34:35 PM	43970
Arsenic	0.011	0.00031	0.0010	*	mg/L	1	4/1/2019 3:34:35 PM	43970
Lead	0.00042	0.000055	0.00050	J	mg/L	1	4/9/2019 5:23:46 PM	43970
Selenium	ND	0.00048	0.0010		mg/L	1	4/1/2019 3:34:35 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 5:23:46 PM	43970
Uranium	0.0048	0.000085	0.00050		mg/L	1	4/9/2019 5:23:46 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000070	0.000038	0.00020	J	mg/L	1	4/9/2019 1:11:12 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Aniline	7.9	6.2	10	J	µg/L	1	4/8/2019 7:54:01 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 7:54:01 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 7:54:01 PM	43941

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J	Analyte detected below quantitation limits
PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:00:00 AM
Lab ID: 1903C58-012
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 7:54:01 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 7:54:01 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 7:54:01 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 7:54:01 PM	43941
2,4-Dimethylphenol	24	5.9	10		µg/L	1	4/8/2019 7:54:01 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 7:54:01 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 7:54:01 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 7:54:01 PM	43941
1-Methylnaphthalene	10	7.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2-Methylnaphthalene	11	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2-Methylphenol	71	6.3	10		µg/L	1	4/8/2019 7:54:01 PM	43941

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:00:00 AM
Lab ID: 1903C58-012
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	87	5.4	10		µg/L	1	4/8/2019 7:54:01 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 7:54:01 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 7:54:01 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Naphthalene	38	5.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 7:54:01 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 7:54:01 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Phenol	38	6.0	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 7:54:01 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 7:54:01 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 7:54:01 PM	43941
Surr: 2-Fluorophenol	37.6	0	15-101		%Rec	1	4/8/2019 7:54:01 PM	43941
Surr: Phenol-d5	31.4	0	15-84.6		%Rec	1	4/8/2019 7:54:01 PM	43941
Surr: 2,4,6-Tribromophenol	58.4	0	27.8-112		%Rec	1	4/8/2019 7:54:01 PM	43941
Surr: Nitrobenzene-d5	60.7	0	33-113		%Rec	1	4/8/2019 7:54:01 PM	43941
Surr: 2-Fluorobiphenyl	48.3	0	26.6-107		%Rec	1	4/8/2019 7:54:01 PM	43941
Surr: 4-Terphenyl-d14	53.5	0	18.7-148		%Rec	1	4/8/2019 7:54:01 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	5700	17	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Toluene	5000	35	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Ethylbenzene	650	13	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Methyl tert-butyl ether (MTBE)	67	46	100	J	µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2,4-Trimethylbenzene	330	21	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,3,5-Trimethylbenzene	72	19	100	J	µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2-Dibromoethane (EDB)	ND	17	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Naphthalene	65	28	200	J	µg/L	100	4/2/2019 6:03:29 AM	R58813
1-Methylnaphthalene	ND	31	400		µg/L	100	4/2/2019 6:03:29 AM	R58813
2-Methylnaphthalene	ND	35	400		µg/L	100	4/2/2019 6:03:29 AM	R58813
Acetone	ND	120	1000		µg/L	100	4/2/2019 6:03:29 AM	R58813
Bromobenzene	ND	24	100		µg/L	100	4/2/2019 6:03:29 AM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:00:00 AM
Lab ID: 1903C58-012
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	13	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Bromoform	ND	29	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Bromomethane	ND	27	300		µg/L	100	4/2/2019 6:03:29 AM	R58813
2-Butanone	ND	210	1000		µg/L	100	4/2/2019 6:03:29 AM	R58813
Carbon disulfide	ND	45	1000		µg/L	100	4/2/2019 6:03:29 AM	R58813
Carbon Tetrachloride	ND	14	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Chlorobenzene	ND	19	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Chloroethane	ND	18	200		µg/L	100	4/2/2019 6:03:29 AM	R58813
Chloroform	ND	12	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Chloromethane	ND	32	300		µg/L	100	4/2/2019 6:03:29 AM	R58813
2-Chlorotoluene	ND	25	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
4-Chlorotoluene	ND	23	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
cis-1,2-DCE	ND	19	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
cis-1,3-Dichloropropene	ND	14	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2-Dibromo-3-chloropropane	ND	33	200		µg/L	100	4/2/2019 6:03:29 AM	R58813
Dibromochloromethane	ND	24	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Dibromomethane	ND	21	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2-Dichlorobenzene	ND	30	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,3-Dichlorobenzene	ND	25	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,4-Dichlorobenzene	ND	29	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Dichlorodifluoromethane	ND	26	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,1-Dichloroethane	58	14	100	J	µg/L	100	4/2/2019 6:03:29 AM	R58813
1,1-Dichloroethene	ND	21	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2-Dichloropropane	ND	21	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,3-Dichloropropane	ND	20	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
2,2-Dichloropropane	ND	23	200		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,1-Dichloropropene	ND	16	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Hexachlorobutadiene	ND	31	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
2-Hexanone	ND	150	1000		µg/L	100	4/2/2019 6:03:29 AM	R58813
Isopropylbenzene	ND	19	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
4-Isopropyltoluene	ND	22	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	4/2/2019 6:03:29 AM	R58813
Methylene Chloride	ND	15	300		µg/L	100	4/2/2019 6:03:29 AM	R58813
n-Butylbenzene	ND	23	300		µg/L	100	4/2/2019 6:03:29 AM	R58813
n-Propylbenzene	44	21	100	J	µg/L	100	4/2/2019 6:03:29 AM	R58813
sec-Butylbenzene	ND	25	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Styrene	ND	19	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
tert-Butylbenzene	ND	21	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,1,1,2-Tetrachloroethane	ND	21	100		µg/L	100	4/2/2019 6:03:29 AM	R58813

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:00:00 AM
Lab ID: 1903C58-012
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	55	200		µg/L	100	4/2/2019 6:03:29 AM	R58813
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
trans-1,2-DCE	ND	18	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
trans-1,3-Dichloropropene	ND	17	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2,3-Trichlorobenzene	ND	30	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2,4-Trichlorobenzene	ND	20	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,1,1-Trichloroethane	ND	17	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,1,2-Trichloroethane	ND	22	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Trichloroethene (TCE)	ND	17	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
Trichlorofluoromethane	ND	19	100		µg/L	100	4/2/2019 6:03:29 AM	R58813
1,2,3-Trichloropropane	ND	30	200		µg/L	100	4/2/2019 6:03:29 AM	R58813
Vinyl chloride	58	18	100	J	µg/L	100	4/2/2019 6:03:29 AM	R58813
Xylenes, Total	2300	45	150		µg/L	100	4/2/2019 6:03:29 AM	R58813
Surr: 1,2-Dichloroethane-d4	83.9	0	70-130		%Rec	100	4/2/2019 6:03:29 AM	R58813
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	100	4/2/2019 6:03:29 AM	R58813
Surr: Dibromofluoromethane	81.9	0	70-130		%Rec	100	4/2/2019 6:03:29 AM	R58813
Surr: Toluene-d8	97.5	0	70-130		%Rec	100	4/2/2019 6:03:29 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	38	3.1	5.0		mg/L	100	4/2/2019 6:03:29 AM	G58813
Surr: BFB	103	0	70-130		%Rec	100	4/2/2019 6:03:29 AM	G58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:15:00 AM
Lab ID: 1903C58-013
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.5	0.35	1.0		mg/L	1	3/29/2019 10:21:08 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 10:21:08 PM	43943
Surr: DNOP	107	0	70-130		%Rec	1	3/29/2019 10:21:08 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.50	0.25	0.50		mg/L	5	3/27/2019 6:48:17 PM	R58708
Chloride	240	10	10		mg/L	20	3/27/2019 7:01:09 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 6:48:17 PM	R58708
Bromide	1.4	0.068	0.50		mg/L	5	3/27/2019 6:48:17 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 6:48:17 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 6:48:17 PM	R58708
Sulfate	10	0.32	2.5		mg/L	5	3/27/2019 6:48:17 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:29:03 PM	A59060
Barium	0.71	0.00065	0.0020		mg/L	1	4/10/2019 5:29:03 PM	A59060
Beryllium	0.00032	0.00028	0.0020	J	mg/L	1	4/10/2019 5:29:03 PM	A59060
Boron	0.38	0.0045	0.040		mg/L	1	4/10/2019 5:29:03 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:29:03 PM	A59060
Calcium	150	0.31	5.0		mg/L	5	4/5/2019 5:50:14 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:29:03 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:29:03 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:29:03 PM	A59060
Iron	3.9	0.044	0.10	*	mg/L	5	4/5/2019 5:50:14 PM	A58959
Magnesium	33	0.050	1.0		mg/L	1	4/10/2019 5:29:03 PM	A59060
Manganese	4.6	0.0014	0.010	*	mg/L	5	4/5/2019 5:50:14 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:29:03 PM	A59060
Nickel	0.0084	0.0040	0.010	J	mg/L	1	4/10/2019 5:29:03 PM	A59060
Potassium	0.50	0.16	1.0	J	mg/L	1	4/10/2019 5:29:03 PM	A59060
Silver	0.0014	0.00094	0.0050	J	mg/L	1	4/10/2019 5:29:03 PM	A59060
Sodium	270	2.1	5.0		mg/L	5	4/5/2019 5:50:14 PM	A58959
Zinc	0.020	0.0023	0.010		mg/L	1	4/10/2019 5:29:03 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.40	0.0046	0.020	*	mg/L	1	4/1/2019 5:46:55 PM	43970
Barium	0.66	0.00065	0.0020		mg/L	1	4/1/2019 5:46:55 PM	43970
Beryllium	0.00051	0.00028	0.0020	J	mg/L	1	4/1/2019 5:46:55 PM	43970
Boron	0.37	0.0045	0.040		mg/L	1	4/1/2019 5:46:55 PM	43970
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:46:55 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:46:55 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:46:55 PM	43970

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Qualifiers:

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E	Value above quantitation range
J	Analyte detected below quantitation limits
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:15:00 AM
Lab ID: 1903C58-013
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:46:55 PM	43970
Iron	4.4	0.044	0.10	*	mg/L	5	4/1/2019 5:48:52 PM	43970
Manganese	4.2	0.0014	0.010	*	mg/L	5	4/1/2019 5:48:52 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 5:46:55 PM	43970
Nickel	0.011	0.0040	0.010		mg/L	1	4/1/2019 5:46:55 PM	43970
Silver	0.0019	0.0014	0.0050	J	mg/L	1	4/1/2019 5:46:55 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 5:46:55 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:33:41 PM	D58733
Arsenic	0.0025	0.00010	0.0010		mg/L	1	3/28/2019 8:33:41 PM	D58733
Lead	0.00017	0.000055	0.00050	J	mg/L	1	3/28/2019 8:33:41 PM	D58733
Selenium	0.00041	0.00017	0.0010	J	mg/L	1	3/28/2019 8:33:41 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:33:41 PM	D58733
Uranium	0.0025	0.000075	0.00050		mg/L	1	4/4/2019 9:49:50 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:36:42 PM	43970
Arsenic	0.0027	0.00031	0.0010		mg/L	1	4/1/2019 3:36:42 PM	43970
Lead	0.0013	0.000055	0.00050		mg/L	1	4/1/2019 3:36:42 PM	43970
Selenium	0.00059	0.00048	0.0010	J	mg/L	1	4/1/2019 3:36:42 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:36:42 PM	43970
Uranium	0.0023	0.000085	0.00050		mg/L	1	4/1/2019 3:36:42 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000069	0.000038	0.00020	J	mg/L	1	4/9/2019 1:13:30 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 8:23:51 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 8:23:51 PM	43941

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:15:00 AM
Lab ID: 1903C58-013
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 8:23:51 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Carbazole	9.3	6.3	10	J	µg/L	1	4/8/2019 8:23:51 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 8:23:51 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 8:23:51 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 8:23:51 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 8:23:51 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 8:23:51 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 8:23:51 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Fluorene	8.1	6.3	10	J	µg/L	1	4/8/2019 8:23:51 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 8:23:51 PM	43941
1-Methylnaphthalene	63	7.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2-Methylnaphthalene	15	6.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 8:23:51 PM	43941

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:15:00 AM
Lab ID: 1903C58-013
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 8:23:51 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 8:23:51 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 8:23:51 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Naphthalene	50	5.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 8:23:51 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 8:23:51 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Phenol	18	6.0	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 8:23:51 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 8:23:51 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 8:23:51 PM	43941
Surr: 2-Fluorophenol	43.3	0	15-101		%Rec	1	4/8/2019 8:23:51 PM	43941
Surr: Phenol-d5	35.5	0	15-84.6		%Rec	1	4/8/2019 8:23:51 PM	43941
Surr: 2,4,6-Tribromophenol	55.3	0	27.8-112		%Rec	1	4/8/2019 8:23:51 PM	43941
Surr: Nitrobenzene-d5	69.0	0	33-113		%Rec	1	4/8/2019 8:23:51 PM	43941
Surr: 2-Fluorobiphenyl	54.0	0	26.6-107		%Rec	1	4/8/2019 8:23:51 PM	43941
Surr: 4-Terphenyl-d14	53.3	0	18.7-148		%Rec	1	4/8/2019 8:23:51 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2200	33	200		µg/L	200	4/2/2019 6:31:54 AM	R58813
Toluene	19	7.0	20	J	µg/L	20	4/2/2019 7:00:26 AM	R58813
Ethylbenzene	220	2.6	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Methyl tert-butyl ether (MTBE)	240	9.1	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2,4-Trimethylbenzene	98	4.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Naphthalene	68	5.5	40		µg/L	20	4/2/2019 7:00:26 AM	R58813
1-Methylnaphthalene	83	6.3	80		µg/L	20	4/2/2019 7:00:26 AM	R58813
2-Methylnaphthalene	19	6.9	80	J	µg/L	20	4/2/2019 7:00:26 AM	R58813
Acetone	ND	24	200		µg/L	20	4/2/2019 7:00:26 AM	R58813
Bromobenzene	ND	4.9	20		µg/L	20	4/2/2019 7:00:26 AM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:15:00 AM
Lab ID: 1903C58-013
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	2.7	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Bromoform	ND	5.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Bromomethane	ND	5.5	60		µg/L	20	4/2/2019 7:00:26 AM	R58813
2-Butanone	ND	42	200		µg/L	20	4/2/2019 7:00:26 AM	R58813
Carbon disulfide	ND	9.1	200		µg/L	20	4/2/2019 7:00:26 AM	R58813
Carbon Tetrachloride	ND	2.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Chlorobenzene	ND	3.9	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Chloroethane	ND	3.6	40		µg/L	20	4/2/2019 7:00:26 AM	R58813
Chloroform	ND	2.4	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Chloromethane	ND	6.4	60		µg/L	20	4/2/2019 7:00:26 AM	R58813
2-Chlorotoluene	ND	4.9	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
4-Chlorotoluene	ND	4.7	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
cis-1,2-DCE	ND	3.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	4/2/2019 7:00:26 AM	R58813
Dibromochloromethane	ND	4.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Dibromomethane	ND	4.2	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,1-Dichloroethane	9.1	2.8	20	J	µg/L	20	4/2/2019 7:00:26 AM	R58813
1,1-Dichloroethene	9.1	4.1	20	J	µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2-Dichloropropane	ND	4.2	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,3-Dichloropropane	ND	4.0	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
2,2-Dichloropropane	ND	4.7	40		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,1-Dichloropropene	ND	3.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Hexachlorobutadiene	ND	6.2	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
2-Hexanone	ND	31	200		µg/L	20	4/2/2019 7:00:26 AM	R58813
Isopropylbenzene	13	3.8	20	J	µg/L	20	4/2/2019 7:00:26 AM	R58813
4-Isopropyltoluene	ND	4.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
4-Methyl-2-pentanone	ND	14	200		µg/L	20	4/2/2019 7:00:26 AM	R58813
Methylene Chloride	ND	3.1	60		µg/L	20	4/2/2019 7:00:26 AM	R58813
n-Butylbenzene	4.7	4.6	60	J	µg/L	20	4/2/2019 7:00:26 AM	R58813
n-Propylbenzene	29	4.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
sec-Butylbenzene	ND	5.0	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Styrene	ND	3.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
tert-Butylbenzene	ND	4.1	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	4/2/2019 7:00:26 AM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:15:00 AM
Lab ID: 1903C58-013
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	4/2/2019 7:00:26 AM	R58813
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
trans-1,2-DCE	ND	3.6	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,1,1-Trichloroethane	6.4	3.5	20	J	µg/L	20	4/2/2019 7:00:26 AM	R58813
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Trichlorofluoromethane	ND	3.8	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	4/2/2019 7:00:26 AM	R58813
Vinyl chloride	ND	3.6	20		µg/L	20	4/2/2019 7:00:26 AM	R58813
Xylenes, Total	90	9.1	30		µg/L	20	4/2/2019 7:00:26 AM	R58813
Surr: 1,2-Dichloroethane-d4	86.8	0	70-130		%Rec	20	4/2/2019 7:00:26 AM	R58813
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	20	4/2/2019 7:00:26 AM	R58813
Surr: Dibromofluoromethane	83.6	0	70-130		%Rec	20	4/2/2019 7:00:26 AM	R58813
Surr: Toluene-d8	98.9	0	70-130		%Rec	20	4/2/2019 7:00:26 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	8.2	0.61	1.0		mg/L	20	4/2/2019 7:00:26 AM	G58813
Surr: BFB	104	0	70-130		%Rec	20	4/2/2019 7:00:26 AM	G58813

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-37
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 12:56:00 PM
Lab ID: 1903C58-014
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.082	0.0033	0.0095		µg/L	1	4/1/2019 2:13:25 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	21	0.35	1.0		mg/L	1	3/29/2019 10:45:26 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 10:45:26 PM	43943
Surr: DNOP	113	0	70-130		%Rec	1	3/29/2019 10:45:26 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.93	0.25	0.50		mg/L	5	3/27/2019 7:14:00 PM	R58708
Chloride	110	10	10		mg/L	20	3/27/2019 7:26:52 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 7:14:00 PM	R58708
Bromide	0.56	0.068	0.50		mg/L	5	3/27/2019 7:14:00 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 7:14:00 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 7:14:00 PM	R58708
Sulfate	71	0.32	2.5		mg/L	5	3/27/2019 7:14:00 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:31:04 PM	A59060
Barium	0.48	0.00065	0.0020		mg/L	1	4/10/2019 5:31:04 PM	A59060
Beryllium	0.00031	0.00028	0.0020	J	mg/L	1	4/10/2019 5:31:04 PM	A59060
Boron	0.34	0.0045	0.040		mg/L	1	4/10/2019 5:31:04 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:31:04 PM	A59060
Calcium	19	0.062	1.0		mg/L	1	4/10/2019 5:31:04 PM	A59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:31:04 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:31:04 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:31:04 PM	A59060
Iron	0.34	0.0087	0.020	*	mg/L	1	4/10/2019 5:31:04 PM	A59060
Magnesium	4.0	0.050	1.0		mg/L	1	4/10/2019 5:31:04 PM	A59060
Manganese	0.25	0.00029	0.0020	*	mg/L	1	4/10/2019 5:31:04 PM	A59060
Molybdenum	0.055	0.0067	0.0080		mg/L	1	4/10/2019 5:31:04 PM	A59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 5:31:04 PM	A59060
Potassium	0.99	0.16	1.0	J	mg/L	1	4/10/2019 5:31:04 PM	A59060
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 5:31:04 PM	A59060
Sodium	170	2.1	5.0		mg/L	5	4/5/2019 6:04:04 PM	A58959
Zinc	0.018	0.0023	0.010		mg/L	1	4/10/2019 5:31:04 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.39	0.0046	0.020	*	mg/L	1	4/1/2019 5:51:17 PM	43970
Barium	0.49	0.00065	0.0020		mg/L	1	4/1/2019 5:51:17 PM	43970
Beryllium	0.00056	0.00028	0.0020	J	mg/L	1	4/1/2019 5:51:17 PM	43970
Boron	0.35	0.0045	0.040		mg/L	1	4/1/2019 5:51:17 PM	43970

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-37
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 12:56:00 PM
Lab ID: 1903C58-014
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:51:17 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:51:17 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:51:17 PM	43970
Copper	0.0069	0.0041	0.0060		mg/L	1	4/1/2019 5:51:17 PM	43970
Iron	0.96	0.044	0.10	*	mg/L	5	4/1/2019 5:53:17 PM	43970
Manganese	0.24	0.00029	0.0020	*	mg/L	1	4/1/2019 5:51:17 PM	43970
Molybdenum	0.052	0.0067	0.0080		mg/L	1	4/1/2019 5:51:17 PM	43970
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 5:51:17 PM	43970
Zinc	0.0061	0.0058	0.010	J	mg/L	1	4/1/2019 5:51:17 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:36:18 PM	D58733
Arsenic	0.0013	0.00010	0.0010		mg/L	1	3/28/2019 8:36:18 PM	D58733
Lead	0.0027	0.000055	0.00050		mg/L	1	3/28/2019 8:36:18 PM	D58733
Selenium	0.00062	0.00017	0.0010	J	mg/L	1	3/28/2019 8:36:18 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:36:18 PM	D58733
Uranium	0.0093	0.000075	0.00050		mg/L	1	4/4/2019 9:52:28 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:38:48 PM	43970
Arsenic	0.0018	0.00031	0.0010		mg/L	1	4/1/2019 3:38:48 PM	43970
Lead	0.0060	0.000055	0.00050		mg/L	1	4/1/2019 3:38:48 PM	43970
Selenium	ND	0.00048	0.0010		mg/L	1	4/1/2019 3:38:48 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:38:48 PM	43970
Uranium	0.0094	0.000085	0.00050		mg/L	1	4/1/2019 3:38:48 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00013	0.000038	0.00020	J	mg/L	1	4/9/2019 1:20:26 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 8:53:45 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 12:56:00 PM
Lab ID: 1903C58-014
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Bis(2-ethylhexyl)phthalate	10	8.1	10		µg/L	1	4/8/2019 8:53:45 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 8:53:45 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 8:53:45 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
1,4-Dichlorobenzene	6.3	5.8	10	J	µg/L	1	4/8/2019 8:53:45 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 8:53:45 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 8:53:45 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 8:53:45 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 8:53:45 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 8:53:45 PM	43941
1-Methylnaphthalene	150	7.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-37
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 12:56:00 PM
Lab ID: 1903C58-014
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2-Methylnaphthalene	220	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 8:53:45 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 8:53:45 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 8:53:45 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 8:53:45 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Naphthalene	390	25	50		µg/L	5	4/12/2019 3:18:53 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 8:53:45 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 8:53:45 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Phenol	8.4	6.0	10	J	µg/L	1	4/8/2019 8:53:45 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 8:53:45 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 8:53:45 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 8:53:45 PM	43941
Surr: 2-Fluorophenol	47.8	0	15-101		%Rec	1	4/8/2019 8:53:45 PM	43941
Surr: Phenol-d5	28.5	0	15-84.6		%Rec	1	4/8/2019 8:53:45 PM	43941
Surr: 2,4,6-Tribromophenol	59.2	0	27.8-112		%Rec	1	4/8/2019 8:53:45 PM	43941
Surr: Nitrobenzene-d5	57.6	0	33-113		%Rec	1	4/8/2019 8:53:45 PM	43941
Surr: 2-Fluorobiphenyl	59.3	0	26.6-107		%Rec	1	4/8/2019 8:53:45 PM	43941
Surr: 4-Terphenyl-d14	50.7	0	18.7-148		%Rec	1	4/8/2019 8:53:45 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	800	8.3	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Toluene	460	18	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Ethylbenzene	26	6.6	50	J	µg/L	50	4/2/2019 7:28:51 AM	R58813
Methyl tert-butyl ether (MTBE)	47	23	50	J	µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2,4-Trimethylbenzene	1100	11	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,3,5-Trimethylbenzene	180	9.4	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2-Dichloroethane (EDC)	20	9.7	50	J	µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2-Dibromoethane (EDB)	ND	8.3	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Naphthalene	860	14	100		µg/L	50	4/2/2019 7:28:51 AM	R58813
1-Methylnaphthalene	180	16	200	J	µg/L	50	4/2/2019 7:28:51 AM	R58813
2-Methylnaphthalene	250	17	200		µg/L	50	4/2/2019 7:28:51 AM	R58813

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CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-37
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 12:56:00 PM
Lab ID: 1903C58-014
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	ND	60	500		µg/L	50	4/2/2019 7:28:51 AM	R58813
Bromobenzene	ND	12	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Bromodichloromethane	ND	6.7	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Bromoform	ND	14	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Bromomethane	ND	14	150		µg/L	50	4/2/2019 7:28:51 AM	R58813
2-Butanone	ND	100	500		µg/L	50	4/2/2019 7:28:51 AM	R58813
Carbon disulfide	ND	23	500		µg/L	50	4/2/2019 7:28:51 AM	R58813
Carbon Tetrachloride	ND	7.0	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Chlorobenzene	ND	9.7	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Chloroethane	ND	8.9	100		µg/L	50	4/2/2019 7:28:51 AM	R58813
Chloroform	ND	6.1	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Chloromethane	ND	16	150		µg/L	50	4/2/2019 7:28:51 AM	R58813
2-Chlorotoluene	ND	12	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
4-Chlorotoluene	ND	12	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
cis-1,2-DCE	ND	9.5	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
cis-1,3-Dichloropropene	ND	6.9	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2-Dibromo-3-chloropropane	ND	16	100		µg/L	50	4/2/2019 7:28:51 AM	R58813
Dibromochloromethane	ND	12	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Dibromomethane	ND	10	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2-Dichlorobenzene	ND	15	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,3-Dichlorobenzene	ND	12	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,4-Dichlorobenzene	15	15	50	J	µg/L	50	4/2/2019 7:28:51 AM	R58813
Dichlorodifluoromethane	ND	13	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,1-Dichloroethane	28	7.0	50	J	µg/L	50	4/2/2019 7:28:51 AM	R58813
1,1-Dichloroethene	79	10	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2-Dichloropropane	ND	10	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,3-Dichloropropane	ND	10	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
2,2-Dichloropropane	ND	12	100		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,1-Dichloropropene	ND	8.1	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Hexachlorobutadiene	ND	15	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
2-Hexanone	ND	77	500		µg/L	50	4/2/2019 7:28:51 AM	R58813
Isopropylbenzene	84	9.6	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
4-Isopropyltoluene	ND	11	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
4-Methyl-2-pentanone	ND	36	500		µg/L	50	4/2/2019 7:28:51 AM	R58813
Methylene Chloride	ND	7.7	150		µg/L	50	4/2/2019 7:28:51 AM	R58813
n-Butylbenzene	ND	11	150		µg/L	50	4/2/2019 7:28:51 AM	R58813
n-Propylbenzene	140	11	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
sec-Butylbenzene	22	12	50	J	µg/L	50	4/2/2019 7:28:51 AM	R58813
Styrene	ND	9.6	50		µg/L	50	4/2/2019 7:28:51 AM	R58813

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Collection Date: 3/26/2019 12:56:00 PM
Lab ID: 1903C58-014 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	10	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,1,1,2-Tetrachloroethane	ND	10	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,1,2,2-Tetrachloroethane	ND	27	100		µg/L	50	4/2/2019 7:28:51 AM	R58813
Tetrachloroethene (PCE)	ND	7.5	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
trans-1,2-DCE	ND	9.0	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
trans-1,3-Dichloropropene	ND	8.3	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2,3-Trichlorobenzene	ND	15	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2,4-Trichlorobenzene	ND	9.8	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,1,1-Trichloroethane	ND	8.6	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,1,2-Trichloroethane	ND	11	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Trichloroethene (TCE)	190	8.3	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Trichlorofluoromethane	ND	9.5	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
1,2,3-Trichloropropane	ND	15	100		µg/L	50	4/2/2019 7:28:51 AM	R58813
Vinyl chloride	ND	9.0	50		µg/L	50	4/2/2019 7:28:51 AM	R58813
Xylenes, Total	900	23	75		µg/L	50	4/2/2019 7:28:51 AM	R58813
Surr: 1,2-Dichloroethane-d4	86.4	0	70-130		%Rec	50	4/2/2019 7:28:51 AM	R58813
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	50	4/2/2019 7:28:51 AM	R58813
Surr: Dibromofluoromethane	82.4	0	70-130		%Rec	50	4/2/2019 7:28:51 AM	R58813
Surr: Toluene-d8	97.7	0	70-130		%Rec	50	4/2/2019 7:28:51 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	16	1.5	2.5		mg/L	50	4/2/2019 7:28:51 AM	G58813
Surr: BFB	103	0	70-130		%Rec	50	4/2/2019 7:28:51 AM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 1:20:00 PM
Lab ID: 1903C58-015
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/1/2019 2:28:25 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.64	0.35	1.0	J	mg/L	1	3/29/2019 11:09:33 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 11:09:33 PM	43943
Surr: DNOP	104	0	70-130		%Rec	1	3/29/2019 11:09:33 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.65	0.25	0.50		mg/L	5	3/27/2019 7:39:43 PM	R58708
Chloride	190	10	10		mg/L	20	3/27/2019 7:52:36 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 7:39:43 PM	R58708
Bromide	1.1	0.068	0.50		mg/L	5	3/27/2019 7:39:43 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 7:39:43 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 7:39:43 PM	R58708
Sulfate	95	0.32	2.5		mg/L	5	3/27/2019 7:39:43 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.050	0.0025	0.020		mg/L	1	4/10/2019 5:33:12 PM	A59060
Barium	0.35	0.00065	0.0020		mg/L	1	4/10/2019 5:33:12 PM	A59060
Beryllium	0.00037	0.00028	0.0020	J	mg/L	1	4/10/2019 5:33:12 PM	A59060
Boron	0.22	0.0045	0.040		mg/L	1	4/10/2019 5:33:12 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:33:12 PM	A59060
Calcium	160	0.31	5.0		mg/L	5	4/5/2019 6:10:47 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:33:12 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:33:12 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:33:12 PM	A59060
Iron	3.6	0.044	0.10	*	mg/L	5	4/5/2019 6:10:47 PM	A58959
Magnesium	45	0.050	1.0		mg/L	1	4/10/2019 5:33:12 PM	A59060
Manganese	3.1	0.0014	0.010	*	mg/L	5	4/5/2019 6:10:47 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:33:12 PM	A59060
Nickel	0.0074	0.0040	0.010	J	mg/L	1	4/10/2019 5:33:12 PM	A59060
Potassium	0.39	0.16	1.0	J	mg/L	1	4/10/2019 5:33:12 PM	A59060
Silver	0.0019	0.00094	0.0050	J	mg/L	1	4/10/2019 5:33:12 PM	A59060
Sodium	180	2.1	5.0		mg/L	5	4/5/2019 6:10:47 PM	A58959
Zinc	0.023	0.0023	0.010		mg/L	1	4/10/2019 5:33:12 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	10	0.091	0.40	*	mg/L	20	4/1/2019 5:59:47 PM	43970
Barium	1.8	0.0032	0.010		mg/L	5	4/1/2019 5:57:35 PM	43970
Beryllium	0.0010	0.00028	0.0020	J	mg/L	1	4/1/2019 5:55:32 PM	43970
Boron	0.23	0.0045	0.040		mg/L	1	4/1/2019 5:55:32 PM	43970

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 5:55:32 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 5:55:32 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 5:55:32 PM	43970
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 5:55:32 PM	43970
Iron	7.7	0.17	0.40	*	mg/L	20	4/1/2019 5:59:47 PM	43970
Manganese	3.4	0.0014	0.010	*	mg/L	5	4/1/2019 5:57:35 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 5:55:32 PM	43970
Nickel	0.013	0.0040	0.010		mg/L	1	4/1/2019 5:55:32 PM	43970
Silver	0.0021	0.0014	0.0050	J	mg/L	1	4/1/2019 5:55:32 PM	43970
Zinc	0.014	0.0058	0.010		mg/L	1	4/1/2019 5:55:32 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:38:55 PM	D58733
Arsenic	0.00027	0.00010	0.0010	J	mg/L	1	3/28/2019 8:38:55 PM	D58733
Lead	0.00024	0.000055	0.00050	J	mg/L	1	3/28/2019 8:38:55 PM	D58733
Selenium	ND	0.00017	0.0010		mg/L	1	3/28/2019 8:38:55 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:38:55 PM	D58733
Uranium	0.0029	0.000075	0.00050		mg/L	1	4/4/2019 9:55:05 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:40:55 PM	43970
Arsenic	0.0019	0.00031	0.0010		mg/L	1	4/1/2019 3:40:55 PM	43970
Lead	0.0055	0.000055	0.00050		mg/L	1	4/1/2019 3:40:55 PM	43970
Selenium	0.0012	0.00048	0.0010		mg/L	1	4/1/2019 3:40:55 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:40:55 PM	43970
Uranium	0.0036	0.000085	0.00050		mg/L	1	4/1/2019 3:40:55 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000085	0.000038	0.00020	J	mg/L	1	4/9/2019 1:22:37 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 9:23:28 PM	43941

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Collection Date: 3/26/2019 1:20:00 PM
Lab ID: 1903C58-015
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	7.5	6.3	20	J	µg/L	1	4/8/2019 9:23:28 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 9:23:28 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 9:23:28 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 9:23:28 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 9:23:28 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 9:23:28 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 9:23:28 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 9:23:28 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 9:23:28 PM	43941

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Lab ID: 1903C58-015
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 9:23:28 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 9:23:28 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 9:23:28 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 9:23:28 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Naphthalene	ND	5.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 9:23:28 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 9:23:28 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Phenol	ND	6.0	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 9:23:28 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 9:23:28 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 9:23:28 PM	43941
Surr: 2-Fluorophenol	34.8	0	15-101		%Rec	1	4/8/2019 9:23:28 PM	43941
Surr: Phenol-d5	26.2	0	15-84.6		%Rec	1	4/8/2019 9:23:28 PM	43941
Surr: 2,4,6-Tribromophenol	47.5	0	27.8-112		%Rec	1	4/8/2019 9:23:28 PM	43941
Surr: Nitrobenzene-d5	47.8	0	33-113		%Rec	1	4/8/2019 9:23:28 PM	43941
Surr: 2-Fluorobiphenyl	36.2	0	26.6-107		%Rec	1	4/8/2019 9:23:28 PM	43941
Surr: 4-Terphenyl-d14	43.4	0	18.7-148		%Rec	1	4/8/2019 9:23:28 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	21	0.17	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Ethylbenzene	3.4	0.13	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Methyl tert-butyl ether (MTBE)	17	0.46	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2,4-Trimethylbenzene	0.31	0.21	1.0	J	µg/L	1	4/2/2019 7:57:17 AM	R58813
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2-Dichloroethane (EDC)	0.34	0.19	1.0	J	µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 7:57:17 AM	R58813

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Lab ID: 1903C58-015 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Acetone	ND	1.2	10		µg/L	1	4/2/2019 7:57:17 AM	R58813
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 7:57:17 AM	R58813
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 7:57:17 AM	R58813
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Chlorobenzene	0.41	0.19	1.0	J	µg/L	1	4/2/2019 7:57:17 AM	R58813
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,4-Dichlorobenzene	5.6	0.29	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,1-Dichloroethane	0.52	0.14	1.0	J	µg/L	1	4/2/2019 7:57:17 AM	R58813
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 7:57:17 AM	R58813
Isopropylbenzene	0.48	0.19	1.0	J	µg/L	1	4/2/2019 7:57:17 AM	R58813
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 7:57:17 AM	R58813
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
n-Propylbenzene	0.50	0.21	1.0	J	µg/L	1	4/2/2019 7:57:17 AM	R58813
sec-Butylbenzene	1.3	0.25	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 1:20:00 PM
Lab ID: 1903C58-015 **Matrix:** AQUEOUS **Received Date:** 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 7:57:17 AM	R58813
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 7:57:17 AM	R58813
Surr: 1,2-Dichloroethane-d4	85.5	0	70-130		%Rec	1	4/2/2019 7:57:17 AM	R58813
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	4/2/2019 7:57:17 AM	R58813
Surr: Dibromofluoromethane	82.3	0	70-130		%Rec	1	4/2/2019 7:57:17 AM	R58813
Surr: Toluene-d8	96.2	0	70-130		%Rec	1	4/2/2019 7:57:17 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.51	0.031	0.050		mg/L	1	4/2/2019 7:57:17 AM	G58813
Surr: BFB	104	0	70-130		%Rec	1	4/2/2019 7:57:17 AM	G58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 2:51:00 PM
Lab ID: 1903C58-016
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	4/1/2019 2:43:24 PM	43995
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.7	0.35	1.0		mg/L	1	3/29/2019 11:33:43 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 11:33:43 PM	43943
Surr: DNOP	99.0	0	70-130		%Rec	1	3/29/2019 11:33:43 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.68	0.25	0.50		mg/L	5	3/27/2019 8:05:28 PM	R58708
Chloride	210	10	10		mg/L	20	3/27/2019 8:18:19 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 8:05:28 PM	R58708
Bromide	1.3	0.068	0.50		mg/L	5	3/27/2019 8:05:28 PM	R58708
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/27/2019 8:05:28 PM	R58708
Phosphorus, Orthophosphate (As P)	0.42	0.13	2.5	J	mg/L	5	3/27/2019 8:05:28 PM	R58708
Sulfate	0.48	0.32	2.5	J	mg/L	5	3/27/2019 8:05:28 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:35:08 PM	A59060
Barium	2.2	0.0032	0.010	*	mg/L	5	4/5/2019 6:17:46 PM	A58959
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 5:35:08 PM	A59060
Boron	0.39	0.0045	0.040		mg/L	1	4/10/2019 5:35:08 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:35:08 PM	A59060
Calcium	90	0.062	1.0		mg/L	1	4/10/2019 5:35:08 PM	A59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:35:08 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:35:08 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:35:08 PM	A59060
Iron	2.8	0.044	0.10	*	mg/L	5	4/5/2019 6:17:46 PM	A58959
Magnesium	24	0.050	1.0		mg/L	1	4/10/2019 5:35:08 PM	A59060
Manganese	2.0	0.0014	0.010	*	mg/L	5	4/5/2019 6:17:46 PM	A58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:35:08 PM	A59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 5:35:08 PM	A59060
Potassium	0.55	0.16	1.0	J	mg/L	1	4/10/2019 5:35:08 PM	A59060
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 5:35:08 PM	A59060
Sodium	280	2.1	5.0		mg/L	5	4/5/2019 6:17:46 PM	A58959
Zinc	0.022	0.0023	0.010		mg/L	1	4/10/2019 5:35:08 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.11	0.0046	0.020		mg/L	1	4/1/2019 6:10:31 PM	43970
Barium	2.5	0.0032	0.010	*	mg/L	5	4/1/2019 6:12:33 PM	43970
Beryllium	0.00077	0.00028	0.0020	J	mg/L	1	4/1/2019 6:10:31 PM	43970
Boron	0.38	0.0045	0.040		mg/L	1	4/1/2019 6:10:31 PM	43970

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 2:51:00 PM
Lab ID: 1903C58-016
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 6:10:31 PM	43970
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 6:10:31 PM	43970
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 6:10:31 PM	43970
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 6:10:31 PM	43970
Iron	12	0.17	0.40	*	mg/L	20	4/2/2019 6:43:31 PM	43970
Manganese	1.9	0.0014	0.010	*	mg/L	5	4/1/2019 6:12:33 PM	43970
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 6:10:31 PM	43970
Nickel	ND	0.0040	0.010		mg/L	1	4/1/2019 6:10:31 PM	43970
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 6:10:31 PM	43970
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 6:10:31 PM	43970
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:41:33 PM	D58733
Arsenic	0.00081	0.00010	0.0010	J	mg/L	1	3/28/2019 8:41:33 PM	D58733
Lead	ND	0.000055	0.00050		mg/L	1	3/28/2019 8:41:33 PM	D58733
Selenium	ND	0.00017	0.0010		mg/L	1	3/28/2019 8:41:33 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:41:33 PM	D58733
Uranium	0.00050	0.000075	0.00050	J	mg/L	1	4/4/2019 9:57:42 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 3:43:01 PM	43970
Arsenic	0.0028	0.00031	0.0010		mg/L	1	4/1/2019 3:43:01 PM	43970
Lead	0.00026	0.000055	0.00050	J	mg/L	1	4/1/2019 3:43:01 PM	43970
Selenium	ND	0.00048	0.0010		mg/L	1	4/1/2019 3:43:01 PM	43970
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 3:43:01 PM	43970
Uranium	0.00051	0.000085	0.00050		mg/L	1	4/1/2019 3:43:01 PM	43970
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000083	0.000038	0.00020	J	mg/L	1	4/9/2019 1:24:48 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 9:53:06 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 2:51:00 PM
Lab ID: 1903C58-016
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	6.3	20		µg/L	1	4/8/2019 9:53:06 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 9:53:06 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 9:53:06 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 9:53:06 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 9:53:06 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 9:53:06 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 9:53:06 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 9:53:06 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 9:53:06 PM	43941

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 2:51:00 PM
Lab ID: 1903C58-016
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	15	7.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 9:53:06 PM	43941
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 9:53:06 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 9:53:06 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 9:53:06 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Naphthalene	ND	5.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 9:53:06 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 9:53:06 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Phenol	8.0	6.0	10	J	µg/L	1	4/8/2019 9:53:06 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 9:53:06 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 9:53:06 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 9:53:06 PM	43941
Surr: 2-Fluorophenol	35.5	0	15-101		%Rec	1	4/8/2019 9:53:06 PM	43941
Surr: Phenol-d5	25.9	0	15-84.6		%Rec	1	4/8/2019 9:53:06 PM	43941
Surr: 2,4,6-Tribromophenol	44.4	0	27.8-112		%Rec	1	4/8/2019 9:53:06 PM	43941
Surr: Nitrobenzene-d5	48.5	0	33-113		%Rec	1	4/8/2019 9:53:06 PM	43941
Surr: 2-Fluorobiphenyl	35.2	0	26.6-107		%Rec	1	4/8/2019 9:53:06 PM	43941
Surr: 4-Terphenyl-d14	39.1	0	18.7-148		%Rec	1	4/8/2019 9:53:06 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	170	0.33	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Toluene	ND	0.70	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Ethylbenzene	2.9	0.26	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Methyl tert-butyl ether (MTBE)	220	0.91	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2,4-Trimethylbenzene	0.62	0.43	2.0	J	µg/L	2	4/2/2019 8:25:43 AM	R58813
1,3,5-Trimethylbenzene	ND	0.38	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2-Dichloroethane (EDC)	0.66	0.39	2.0	J	µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Naphthalene	8.0	0.55	4.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1-Methylnaphthalene	36	0.63	8.0		µg/L	2	4/2/2019 8:25:43 AM	R58813

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 2:51:00 PM
Lab ID: 1903C58-016
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	5.0	0.69	8.0	J	µg/L	2	4/2/2019 8:25:43 AM	R58813
Acetone	ND	2.4	20		µg/L	2	4/2/2019 8:25:43 AM	R58813
Bromobenzene	ND	0.49	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Bromodichloromethane	ND	0.27	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Bromoform	ND	0.58	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Bromomethane	ND	0.55	6.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
2-Butanone	ND	4.2	20		µg/L	2	4/2/2019 8:25:43 AM	R58813
Carbon disulfide	ND	0.91	20		µg/L	2	4/2/2019 8:25:43 AM	R58813
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Chlorobenzene	ND	0.39	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Chloroethane	ND	0.36	4.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Chloroform	ND	0.24	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Chloromethane	ND	0.64	6.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
cis-1,2-DCE	ND	0.38	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Dibromochloromethane	ND	0.48	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Dibromomethane	ND	0.42	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,1-Dichloroethane	0.89	0.28	2.0	J	µg/L	2	4/2/2019 8:25:43 AM	R58813
1,1-Dichloroethene	0.66	0.41	2.0	J	µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
2-Hexanone	ND	3.1	20		µg/L	2	4/2/2019 8:25:43 AM	R58813
Isopropylbenzene	ND	0.38	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
4-Isopropyltoluene	ND	0.43	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	4/2/2019 8:25:43 AM	R58813
Methylene Chloride	ND	0.31	6.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
n-Butylbenzene	ND	0.46	6.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
n-Propylbenzene	0.43	0.43	2.0	J	µg/L	2	4/2/2019 8:25:43 AM	R58813
sec-Butylbenzene	0.52	0.50	2.0	J	µg/L	2	4/2/2019 8:25:43 AM	R58813

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 2:51:00 PM
Lab ID: 1903C58-016
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.38	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
tert-Butylbenzene	ND	0.41	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,1,2-Trichloroethane	ND	0.43	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Trichloroethene (TCE)	ND	0.33	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Vinyl chloride	ND	0.36	2.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Xylenes, Total	ND	0.91	3.0		µg/L	2	4/2/2019 8:25:43 AM	R58813
Surr: 1,2-Dichloroethane-d4	90.1	0	70-130		%Rec	2	4/2/2019 8:25:43 AM	R58813
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	2	4/2/2019 8:25:43 AM	R58813
Surr: Dibromofluoromethane	82.5	0	70-130		%Rec	2	4/2/2019 8:25:43 AM	R58813
Surr: Toluene-d8	100	0	70-130		%Rec	2	4/2/2019 8:25:43 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	1.0	0.061	0.10		mg/L	2	4/2/2019 8:25:43 AM	G58813
Surr: BFB	105	0	70-130		%Rec	2	4/2/2019 8:25:43 AM	G58813

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:58:00 AM
Lab ID: 1903C58-017
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	3/29/2019 11:57:44 PM	43943
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/29/2019 11:57:44 PM	43943
Surr: DNOP	106	0	70-130		%Rec	1	3/29/2019 11:57:44 PM	43943
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.94	0.25	0.50		mg/L	5	3/27/2019 8:31:11 PM	R58708
Chloride	150	10	10		mg/L	20	3/27/2019 8:44:03 PM	R58708
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/27/2019 8:31:11 PM	R58708
Bromide	0.27	0.068	0.50	J	mg/L	5	3/27/2019 8:31:11 PM	R58708
Nitrogen, Nitrate (As N)	0.66	0.14	0.50		mg/L	5	3/27/2019 8:31:11 PM	R58708
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/27/2019 8:31:11 PM	R58708
Sulfate	640	1.3	10		mg/L	20	3/27/2019 8:44:03 PM	R58708
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.059	0.0025	0.020		mg/L	1	4/10/2019 5:37:05 PM	A59060
Barium	0.034	0.00065	0.0020		mg/L	1	4/10/2019 5:37:05 PM	A59060
Beryllium	0.00034	0.00028	0.0020	J	mg/L	1	4/10/2019 5:37:05 PM	A59060
Boron	0.45	0.0045	0.040		mg/L	1	4/10/2019 5:37:05 PM	A59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:37:05 PM	A59060
Calcium	150	0.31	5.0		mg/L	5	4/5/2019 6:24:36 PM	A58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:37:05 PM	A59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:37:05 PM	A59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:37:05 PM	A59060
Iron	0.032	0.0087	0.020		mg/L	1	4/10/2019 5:37:05 PM	A59060
Magnesium	30	0.050	1.0		mg/L	1	4/10/2019 5:37:05 PM	A59060
Manganese	2.1	0.0014	0.010	*	mg/L	5	4/5/2019 6:24:36 PM	A58959
Molybdenum	0.0097	0.0067	0.0080		mg/L	1	4/10/2019 5:37:05 PM	A59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 5:37:05 PM	A59060
Potassium	0.51	0.16	1.0	J	mg/L	1	4/10/2019 5:37:05 PM	A59060
Silver	0.0023	0.00094	0.0050	J	mg/L	1	4/10/2019 5:37:05 PM	A59060
Sodium	290	2.1	5.0		mg/L	5	4/5/2019 6:24:36 PM	A58959
Zinc	0.038	0.0023	0.010		mg/L	1	4/10/2019 5:37:05 PM	A59060
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	5.5	0.23	1.0	*	mg/L	50	4/1/2019 6:27:43 PM	43971
Barium	0.14	0.00065	0.0020		mg/L	1	4/1/2019 6:14:44 PM	43971
Beryllium	0.00095	0.00028	0.0020	J	mg/L	1	4/1/2019 6:14:44 PM	43971
Boron	0.45	0.0045	0.040		mg/L	1	4/1/2019 6:14:44 PM	43971
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 6:14:44 PM	43971
Chromium	ND	0.0015	0.0060		mg/L	1	4/1/2019 6:14:44 PM	43971
Cobalt	ND	0.0031	0.0060		mg/L	1	4/1/2019 6:14:44 PM	43971

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:58:00 AM
Lab ID: 1903C58-017
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 6:14:44 PM	43971
Iron	2.0	0.44	1.0	*	mg/L	50	4/1/2019 6:27:43 PM	43971
Manganese	2.0	0.0014	0.010	*	mg/L	5	4/1/2019 6:20:55 PM	43971
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/1/2019 6:14:44 PM	43971
Nickel	0.0056	0.0040	0.010	J	mg/L	1	4/1/2019 6:14:44 PM	43971
Silver	0.0024	0.0014	0.0050	J	mg/L	1	4/1/2019 6:14:44 PM	43971
Zinc	0.0059	0.0058	0.010	J	mg/L	1	4/1/2019 6:14:44 PM	43971
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	3/28/2019 8:44:10 PM	D58733
Arsenic	0.00034	0.00010	0.0010	J	mg/L	1	3/28/2019 8:44:10 PM	D58733
Lead	0.00011	0.000055	0.00050	J	mg/L	1	3/28/2019 8:44:10 PM	D58733
Selenium	0.00071	0.00017	0.0010	J	mg/L	1	3/28/2019 8:44:10 PM	D58733
Thallium	ND	0.000048	0.00050		mg/L	1	3/28/2019 8:44:10 PM	D58733
Uranium	0.018	0.000075	0.00050		mg/L	1	4/4/2019 10:00:20 PM	B58925
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/1/2019 4:16:55 PM	43971
Arsenic	0.00078	0.00031	0.0010	J	mg/L	1	4/1/2019 4:16:55 PM	43971
Lead	0.0019	0.000055	0.00050		mg/L	1	4/1/2019 4:16:55 PM	43971
Selenium	0.0014	0.00048	0.0010		mg/L	1	4/1/2019 4:16:55 PM	43971
Thallium	ND	0.000052	0.00050		mg/L	1	4/1/2019 4:16:55 PM	43971
Uranium	0.020	0.000085	0.00050		mg/L	1	4/9/2019 5:17:24 PM	43971
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000075	0.000038	0.00020	J	mg/L	1	4/9/2019 1:27:00 PM	44192
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Acenaphthylene	ND	6.2	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Aniline	ND	6.2	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Anthracene	ND	5.7	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Azobenzene	ND	6.7	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Benzoic acid	6.8	6.3	20	J	µg/L	1	4/8/2019 10:22:47 PM	43941
Benzyl alcohol	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/8/2019 10:22:47 PM	43941

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:58:00 AM
Lab ID: 1903C58-017
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/8/2019 10:22:47 PM	43941
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Carbazole	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/8/2019 10:22:47 PM	43941
4-Chloroaniline	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2-Chlorophenol	ND	5.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Chrysene	ND	6.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Dibenzofuran	ND	6.9	10		µg/L	1	4/8/2019 10:22:47 PM	43941
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Diethyl phthalate	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/8/2019 10:22:47 PM	43941
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/8/2019 10:22:47 PM	43941
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/8/2019 10:22:47 PM	43941
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/8/2019 10:22:47 PM	43941
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Fluoranthene	ND	5.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Fluorene	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Hexachloroethane	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Isophorone	ND	6.2	10		µg/L	1	4/8/2019 10:22:47 PM	43941
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2-Methylphenol	ND	6.3	10		µg/L	1	4/8/2019 10:22:47 PM	43941

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:58:00 AM
Lab ID: 1903C58-017
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/8/2019 10:22:47 PM	43941
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/8/2019 10:22:47 PM	43941
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/8/2019 10:22:47 PM	43941
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Naphthalene	ND	5.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2-Nitroaniline	ND	5.9	10		µg/L	1	4/8/2019 10:22:47 PM	43941
3-Nitroaniline	ND	6.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
4-Nitroaniline	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Nitrobenzene	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2-Nitrophenol	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
4-Nitrophenol	ND	5.6	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Pentachlorophenol	ND	5.3	20		µg/L	1	4/8/2019 10:22:47 PM	43941
Phenanthrene	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Phenol	ND	6.0	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Pyrene	ND	6.5	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Pyridine	ND	5.4	10		µg/L	1	4/8/2019 10:22:47 PM	43941
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/8/2019 10:22:47 PM	43941
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/8/2019 10:22:47 PM	43941
Surr: 2-Fluorophenol	14.7	0	15-101	S	%Rec	1	4/8/2019 10:22:47 PM	43941
Surr: Phenol-d5	4.62	0	15-84.6	S	%Rec	1	4/8/2019 10:22:47 PM	43941
Surr: 2,4,6-Tribromophenol	55.0	0	27.8-112		%Rec	1	4/8/2019 10:22:47 PM	43941
Surr: Nitrobenzene-d5	53.3	0	33-113		%Rec	1	4/8/2019 10:22:47 PM	43941
Surr: 2-Fluorobiphenyl	41.9	0	26.6-107		%Rec	1	4/8/2019 10:22:47 PM	43941
Surr: 4-Terphenyl-d14	53.3	0	18.7-148		%Rec	1	4/8/2019 10:22:47 PM	43941
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Methyl tert-butyl ether (MTBE)	0.58	0.46	1.0	J	µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Acetone	3.3	1.2	10	J	µg/L	1	4/2/2019 8:54:11 AM	R58813
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:58:00 AM
Lab ID: 1903C58-017
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 8:54:11 AM	R58813
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 8:54:11 AM	R58813
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Chloroform	1.5	0.12	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Chloromethane	0.45	0.32	3.0	J	µg/L	1	4/2/2019 8:54:11 AM	R58813
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 8:54:11 AM	R58813
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 8:54:11 AM	R58813
Methylene Chloride	0.59	0.15	3.0	J	µg/L	1	4/2/2019 8:54:11 AM	R58813
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 11:58:00 AM
Lab ID: 1903C58-017
Matrix: AQUEOUS
Received Date: 3/26/2019 5:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Tetrachloroethene (PCE)	0.60	0.15	1.0	J	µg/L	1	4/2/2019 8:54:11 AM	R58813
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 8:54:11 AM	R58813
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 8:54:11 AM	R58813
Surr: 1,2-Dichloroethane-d4	85.6	0	70-130		%Rec	1	4/2/2019 8:54:11 AM	R58813
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	4/2/2019 8:54:11 AM	R58813
Surr: Dibromofluoromethane	83.6	0	70-130		%Rec	1	4/2/2019 8:54:11 AM	R58813
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	4/2/2019 8:54:11 AM	R58813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 8:54:11 AM	G58813
Surr: BFB	102	0	70-130		%Rec	1	4/2/2019 8:54:11 AM	G58813

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-43970**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **43970**	RunNo: **58806**
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-43970**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **43970**	RunNo: **58806**
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0087	0.020	0.01000	0	87.5	50	150			J
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Beryllium	0.0017	0.0020	0.002000	0	86.1	50	150			J
Boron	0.040	0.040	0.04000	0	99.4	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	89.7	50	150			J
Chromium	0.0060	0.0060	0.006000	0	99.8	50	150			J
Cobalt	0.0077	0.0060	0.006000	0	129	50	150			
Copper	0.0075	0.0060	0.006000	0	125	50	150			
Iron	0.022	0.020	0.02000	0	109	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Silver	0.0049	0.0050	0.005000	0	97.5	50	150			J
Zinc	0.0065	0.010	0.005000	0	131	50	150			J

Sample ID: **LCS-43970**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **43970**	RunNo: **58806**
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			

Qualifiers:

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **LCS-43970** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **43970** RunNo: **58806**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.0	85	115			
Beryllium	0.52	0.0020	0.5000	0	103	85	115			
Boron	0.50	0.040	0.5000	0	99.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.6	85	115			
Copper	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.53	0.020	0.5000	0	105	85	115			
Manganese	0.50	0.0020	0.5000	0	99.7	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.5	85	115			
Nickel	0.49	0.010	0.5000	0	97.7	85	115			
Silver	0.098	0.0050	0.1000	0	98.3	85	115			
Zinc	0.49	0.010	0.5000	0	97.9	85	115			

Sample ID: **MB-43971** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **43971** RunNo: **58806**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-43971** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **43971** RunNo: **58806**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976156** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	105	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **LLLCS-43971**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **43971**	RunNo: **58806**
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976156** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Beryllium	0.0018	0.0020	0.002000	0	89.1	50	150			J
Boron	0.040	0.040	0.04000	0	99.0	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	91.6	50	150			J
Chromium	0.0056	0.0060	0.006000	0	92.7	50	150			J
Cobalt	0.0066	0.0060	0.006000	0	110	50	150			
Copper	0.0078	0.0060	0.006000	0	131	50	150			
Iron	0.019	0.020	0.02000	0	93.6	50	150			J
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Molybdenum	0.0080	0.0080	0.008000	0	100	50	150			
Nickel	0.0062	0.010	0.005000	0	124	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.8	50	150			J
Zinc	0.0063	0.010	0.005000	0	126	50	150			J

Sample ID: **LCS-43971**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **43971**	RunNo: **58806**
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976157** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	85	115			
Barium	0.49	0.0020	0.5000	0	98.1	85	115			
Beryllium	0.51	0.0020	0.5000	0	103	85	115			
Boron	0.50	0.040	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.8	85	115			
Cobalt	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.50	0.0060	0.5000	0	99.6	85	115			
Iron	0.49	0.020	0.5000	0	97.7	85	115			
Manganese	0.49	0.0020	0.5000	0	99.0	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.6	85	115			
Nickel	0.49	0.010	0.5000	0	98.9	85	115			
Silver	0.099	0.0050	0.1000	0	99.0	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Sample ID: **LLLCS-43970**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **43970**	RunNo: **58806**
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976165** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nickel	0.0075	0.010	0.005000	0	149	50	150			J

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **1903C58-017FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-38** Batch ID: **43971** RunNo: **58806**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976313** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.61	0.0020	0.5000	0.1387	93.5	70	130			
Beryllium	0.47	0.0020	0.5000	0.0009480	94.4	70	130			
Boron	0.95	0.040	0.5000	0.4512	100	70	130			
Cadmium	0.45	0.0020	0.5000	0	89.8	70	130			
Chromium	0.44	0.0060	0.5000	0	88.4	70	130			
Cobalt	0.41	0.0060	0.5000	0	82.9	70	130			
Copper	0.50	0.0060	0.5000	0	101	70	130			
Molybdenum	0.45	0.0080	0.5000	0	90.7	70	130			
Nickel	0.47	0.010	0.5000	0.005580	92.2	70	130			
Silver	0.11	0.0050	0.1000	0.002413	107	70	130			
Zinc	0.45	0.010	0.5000	0.005903	87.9	70	130			

Sample ID: **1903C58-017FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-38** Batch ID: **43971** RunNo: **58806**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976314** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.61	0.0020	0.5000	0.1387	93.4	70	130	0.00782	20	
Beryllium	0.47	0.0020	0.5000	0.0009480	94.4	70	130	0.0167	20	
Boron	0.96	0.040	0.5000	0.4512	101	70	130	0.402	20	
Cadmium	0.45	0.0020	0.5000	0	89.7	70	130	0.175	20	
Chromium	0.44	0.0060	0.5000	0	88.3	70	130	0.184	20	
Cobalt	0.41	0.0060	0.5000	0	82.9	70	130	0.0699	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	0.194	20	
Molybdenum	0.45	0.0080	0.5000	0	90.6	70	130	0.0717	20	
Nickel	0.47	0.010	0.5000	0.005580	92.5	70	130	0.353	20	
Silver	0.11	0.0050	0.1000	0.002413	107	70	130	0.196	20	
Zinc	0.45	0.010	0.5000	0.005903	88.0	70	130	0.145	20	

Sample ID: **1903C58-017FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-38** Batch ID: **43971** RunNo: **58806**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976316** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	2.4	0.010	0.5000	2.003	84.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **1903C58-017FMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-38**	Batch ID: **43971**	RunNo: **58806**
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976317** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	2.4	0.010	0.5000	2.003	84.0	70	130	0.0838	20	

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987756** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987757** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	118	50	150			J
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Beryllium	0.0021	0.0020	0.002000	0	103	50	150			
Boron	0.040	0.040	0.04000	0	99.4	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Calcium	0.49	1.0	0.5000	0	98.9	50	150			J
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0056	0.0060	0.006000	0	93.7	50	150			J
Iron	0.019	0.020	0.02000	0	96.1	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **A59060** RunNo: **59060**

Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987757** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0094	0.0080	0.008000	0	118	50	150			
Nickel	0.0051	0.010	0.005000	0	101	50	150			J
Potassium	0.55	1.0	0.5000	0	110	50	150			J
Silver	0.0049	0.0050	0.005000	0	98.6	50	150			J
Zinc	ND	0.010	0.005000	0	0	50	150			S

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A59060** RunNo: **59060**

Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	107	85	115			
Barium	0.49	0.0020	0.5000	0	97.8	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.7	85	115			
Boron	0.50	0.040	0.5000	0	99.3	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	49	1.0	50.00	0	98.1	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Cobalt	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Molybdenum	0.51	0.0080	0.5000	0	101	85	115			
Nickel	0.51	0.010	0.5000	0	101	85	115			
Potassium	49	1.0	50.00	0	98.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A58959**	RunNo: **58959**
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1983211** Units: **mg/L**

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

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A58959**	RunNo: **58959**
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1983212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	95.2	50	150			J
Calcium	0.50	1.0	0.5000	0	99.1	50	150			J
Iron	0.022	0.020	0.02000	0	111	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.1	50	150			J
Sodium	0.52	1.0	0.5000	0	104	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A58959**	RunNo: **58959**
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1983213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	93.3	85	115			
Calcium	49	1.0	50.00	0	98.3	85	115			
Iron	0.47	0.020	0.5000	0	94.0	85	115			
Manganese	0.48	0.0020	0.5000	0	95.7	85	115			
Sodium	49	1.0	50.00	0	97.4	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987905** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987905** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	ND	0.0060								
Copper	0.0016	0.0060								J
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987906** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	118	50	150			J
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Beryllium	0.0021	0.0020	0.002000	0	103	50	150			
Boron	0.040	0.040	0.04000	0	99.4	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Calcium	0.49	1.0	0.5000	0	98.9	50	150			J
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0056	0.0060	0.006000	0	93.7	50	150			J
Iron	0.019	0.020	0.02000	0	96.1	50	150			J
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0094	0.0080	0.008000	0	118	50	150			
Nickel	0.0051	0.010	0.005000	0	101	50	150			J
Potassium	0.55	1.0	0.5000	0	110	50	150			J
Silver	0.0049	0.0050	0.005000	0	98.6	50	150			J
Zinc	0.0048	0.010	0.005000	0	96.5	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987907** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	107	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A59060** RunNo: **59060**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987907** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.8	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.7	85	115			
Boron	0.50	0.040	0.5000	0	99.3	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	49	1.0	50.00	0	98.1	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Cobalt	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Molybdenum	0.51	0.0080	0.5000	0	101	85	115			
Nickel	0.51	0.010	0.5000	0	101	85	115			
Potassium	49	1.0	50.00	0	98.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-43970** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **43970** RunNo: **58807**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976054** Units: **mg/L**

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

Sample ID: **MSLLLCS-43970** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **43970** RunNo: **58807**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976055** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00087	0.0010	0.001000	0	87.2	50	150			J
Arsenic	0.00097	0.0010	0.001000	0	96.7	50	150			J
Lead	0.00050	0.00050	0.0005000	0	100	50	150			
Selenium	0.00093	0.0010	0.001000	0	92.5	50	150			J
Thallium	0.00044	0.00050	0.0005000	0	88.0	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.4	50	150			J

Sample ID: **MSLCS-43970** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **43970** RunNo: **58807**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	102	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.8	85	115			
Lead	0.012	0.00050	0.01250	0	98.4	85	115			
Selenium	0.025	0.0010	0.02500	0	98.1	85	115			
Thallium	0.012	0.00050	0.01250	0	98.7	85	115			
Uranium	0.012	0.00050	0.01250	0	94.6	85	115			

Sample ID: **MB-43971** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **43971** RunNo: **58807**
Prep Date: **3/29/2019** Analysis Date: **4/1/2019** SeqNo: **1976086** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-43971**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **43971**	RunNo: **58807**							
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976086**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	ND	0.00050								

Sample ID: **MSLLLCS-43971**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **43971**	RunNo: **58807**							
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976087**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	104	50	150			
Arsenic	0.00089	0.0010	0.001000	0	89.4	50	150			J
Lead	0.00050	0.00050	0.0005000	0	100	50	150			
Selenium	0.00098	0.0010	0.001000	0	98.1	50	150			J
Thallium	0.00043	0.00050	0.0005000	0	86.9	50	150			J

Sample ID: **MSLCS-43971**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **43971**	RunNo: **58807**							
Prep Date: **3/29/2019**	Analysis Date: **4/1/2019**	SeqNo: **1976088**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	105	85	115			
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Thallium	0.012	0.00050	0.01250	0	97.5	85	115			

Sample ID: **MSLLLCS-43971**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **43971**	RunNo: **59028**							
Prep Date: **3/29/2019**	Analysis Date: **4/9/2019**	SeqNo: **1986815**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00099	0.0010	0.001000	0	99.2	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00048	0.00050	0.0005000	0	95.7	50	150			J
Selenium	0.0012	0.0010	0.001000	0	125	50	150			
Thallium	0.00046	0.00050	0.0005000	0	92.9	50	150			J

Sample ID: **MSLCS-43971**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **43971**	RunNo: **59028**							
Prep Date: **3/29/2019**	Analysis Date: **4/9/2019**	SeqNo: **1986816**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MSLCS-43971**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **43971**	RunNo: **59028**							
Prep Date: **3/29/2019**	Analysis Date: **4/9/2019**	SeqNo: **1986816**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	96.2	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.8	85	115			
Lead	0.012	0.00050	0.01250	0	95.9	85	115			
Selenium	0.025	0.0010	0.02500	0	99.8	85	115			
Thallium	0.012	0.00050	0.01250	0	96.5	85	115			

Sample ID: **MB-43971**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **43971**	RunNo: **59028**							
Prep Date: **3/29/2019**	Analysis Date: **4/9/2019**	SeqNo: **1986883**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-43971**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **43971**	RunNo: **59028**							
Prep Date: **3/29/2019**	Analysis Date: **4/9/2019**	SeqNo: **1986884**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00054	0.00050	0.0005000	0	108	50	150			

Sample ID: **MSLCS-43971**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **43971**	RunNo: **59028**							
Prep Date: **3/29/2019**	Analysis Date: **4/9/2019**	SeqNo: **1986885**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C58733** RunNo: **58733**
Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973010** Units: **mg/L**

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

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C58733** RunNo: **58733**
Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973011** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00083	0.0010	0.001000	0	82.7	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	0.00050	0.00050	0.0005000	0	99.8	50	150			J
Selenium	0.00099	0.0010	0.001000	0	99.4	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	94.5	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C58733** RunNo: **58733**
Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973012** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.6	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			
Thallium	0.012	0.00050	0.01250	0	99.3	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D58733** RunNo: **58733**
Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973090** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	0.00019	0.0010								J
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **D58733** RunNo: **58733**

Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00084	0.0010	0.001000	0	83.7	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	0.00050	0.00050	0.0005000	0	99.3	50	150			J
Selenium	0.00081	0.0010	0.001000	0	81.2	50	150			J
Thallium	0.00044	0.00050	0.0005000	0	88.4	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **LCSW** Batch ID: **D58733** RunNo: **58733**

Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973106** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.9	85	115			
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.013	0.00050	0.01250	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			
Thallium	0.012	0.00050	0.01250	0	99.5	85	115			

Sample ID: **1903C58-005FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **MKTF-33** Batch ID: **D58733** RunNo: **58733**

Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973111** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.9	70	130			
Arsenic	0.027	0.0010	0.02500	0.0006309	104	70	130			
Lead	0.013	0.00050	0.01250	.00007250	99.9	70	130			
Selenium	0.025	0.0010	0.02500	0	99.3	70	130			
Thallium	0.012	0.00050	0.01250	.00004903	97.1	70	130			

Sample ID: **1903C58-005FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **MKTF-33** Batch ID: **D58733** RunNo: **58733**

Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973114** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	102	70	130	1.93	20	
Arsenic	0.026	0.0010	0.02500	0.0006309	103	70	130	1.55	20	
Lead	0.012	0.00050	0.01250	.00007250	98.8	70	130	1.07	20	
Selenium	0.024	0.0010	0.02500	0	96.7	70	130	2.59	20	
Thallium	0.012	0.00050	0.01250	.00004903	97.6	70	130	0.493	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A58925**	RunNo: **58925**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1981556** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A58925**	RunNo: **58925**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1981557** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00048	0.00050	0.0005000	0	95.7	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A58925**	RunNo: **58925**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1981558** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B58925**	RunNo: **58925**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1981609** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B58925**	RunNo: **58925**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1981612** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00048	0.00050	0.0005000	0	96.4	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B58925**	RunNo: **58925**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1981613** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	94.4	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59066**	RunNo: **59066**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988012** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59066**	RunNo: **59066**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988014** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	93.9	85	115			

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59066**	RunNo: **59066**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988019** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00045	0.00050	0.0005000	0	90.8	50	150			J

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-44192**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44192**	RunNo: **59010**
Prep Date: **4/8/2019**	Analysis Date: **4/9/2019**	SeqNo: **1985414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000055	0.00020								J

Sample ID: **LCS-44192**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44192**	RunNo: **59010**
Prep Date: **4/8/2019**	Analysis Date: **4/9/2019**	SeqNo: **1985415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.6	80	120			

Sample ID: **1903C58-003FMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-17**	Batch ID: **44192**	RunNo: **59010**
Prep Date: **4/8/2019**	Analysis Date: **4/9/2019**	SeqNo: **1985420** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0040	0.00020	0.005000	0	80.1	75	125			

Sample ID: **1903C58-003FMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-17**	Batch ID: **44192**	RunNo: **59010**
Prep Date: **4/8/2019**	Analysis Date: **4/9/2019**	SeqNo: **1985421** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0040	0.00020	0.005000	0	79.6	75	125	0.672	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R58708** RunNo: **58708**
Prep Date: Analysis Date: **3/27/2019** SeqNo: **1971983** Units: **mg/L**

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

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R58708** RunNo: **58708**
Prep Date: Analysis Date: **3/27/2019** SeqNo: **1971984** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	92.8	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	92.1	90	110			
Bromide	2.3	0.10	2.500	0	93.6	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.2	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.3	90	110			
Sulfate	9.4	0.50	10.00	0	94.4	90	110			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R58976** RunNo: **58976**
Prep Date: Analysis Date: **4/6/2019** SeqNo: **1983836** Units: **mg/L**

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

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R58976** RunNo: **58976**
Prep Date: Analysis Date: **4/6/2019** SeqNo: **1983837** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-43995**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **43995**	RunNo: **58797**
Prep Date: **4/1/2019**	Analysis Date: **4/1/2019**	SeqNo: **1975975** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-43995**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **43995**	RunNo: **58797**
Prep Date: **4/1/2019**	Analysis Date: **4/1/2019**	SeqNo: **1975977** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.092	0.010	0.1000	0	92.1	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-43943**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **43943**	RunNo: **58726**
Prep Date: **3/28/2019**	Analysis Date: **3/29/2019**	SeqNo: **1974041** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		104	70	130			

Sample ID: **1903C58-003BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-17**	Batch ID: **43943**	RunNo: **58726**
Prep Date: **3/28/2019**	Analysis Date: **3/29/2019**	SeqNo: **1974548** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	7.6	1.0	5.000	1.922	114	68.1	137			
Surr: DNOP	0.61		0.5000		122	70	130			

Sample ID: **1903C58-003BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-17**	Batch ID: **43943**	RunNo: **58726**
Prep Date: **3/28/2019**	Analysis Date: **3/29/2019**	SeqNo: **1974549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	7.7	1.0	5.000	1.922	116	68.1	137	0.953	20	
Surr: DNOP	0.60		0.5000		121	70	130	0	0	

Sample ID: **LCS-43943**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **43943**	RunNo: **58726**
Prep Date: **3/28/2019**	Analysis Date: **3/29/2019**	SeqNo: **1974573** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	71.8	135			
Surr: DNOP	0.55		0.5000		109	70	130			

Qualifiers:

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E	Value above quantitation range
J	Analyte detected below quantitation limits
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R58813** RunNo: **58813**

Prep Date: Analysis Date: **4/1/2019** SeqNo: **1976636** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	77.8	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	18	1.0	20.00	0	89.6	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	80.7	70	130			
Trichloroethene (TCE)	15	1.0	20.00	0	74.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	8.3		10.00		82.9	70	130			
Surr: Toluene-d8	9.5		10.00		95.1	70	130			

Sample ID: **1903c58-003ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-17** Batch ID: **R58813** RunNo: **58813**

Prep Date: Analysis Date: **4/1/2019** SeqNo: **1976642** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1100	5.0	100.0	990.0	84.6	70	130			E
Toluene	100	5.0	100.0	0	102	70	130			
Chlorobenzene	96	5.0	100.0	0	96.1	70	130			
1,1-Dichloroethene	80	5.0	100.0	0	80.5	67.6	130			
Trichloroethene (TCE)	80	5.0	100.0	0	80.1	70	130			
Surr: 1,2-Dichloroethane-d4	42		50.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	50		50.00		101	70	130			
Surr: Dibromofluoromethane	40		50.00		81.0	70	130			
Surr: Toluene-d8	49		50.00		97.5	70	130			

Sample ID: **1903c58-003amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-17** Batch ID: **R58813** RunNo: **58813**

Prep Date: Analysis Date: **4/1/2019** SeqNo: **1976644** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1100	5.0	100.0	990.0	64.0	70	130	1.93	20	ES
Toluene	97	5.0	100.0	0	97.4	70	130	4.55	20	
Chlorobenzene	93	5.0	100.0	0	93.2	70	130	3.06	20	
1,1-Dichloroethene	78	5.0	100.0	0	77.7	67.6	130	3.51	20	
Trichloroethene (TCE)	75	5.0	100.0	0	74.7	70	130	6.93	20	
Surr: 1,2-Dichloroethane-d4	41		50.00		82.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	52		50.00		104	70	130	0	0	
Surr: Dibromofluoromethane	40		50.00		79.4	70	130	0	0	
Surr: Toluene-d8	49		50.00		98.1	70	130	0	0	

Qualifiers:

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E	Value above quantitation range
J	Analyte detected below quantitation limits
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58813**	RunNo: **58813**
Prep Date:	Analysis Date: **4/1/2019**	SeqNo: **1976669** Units: **µg/L**

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

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified at testcode

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58813**	RunNo: **58813**
Prep Date:	Analysis Date: **4/1/2019**	SeqNo: **1976669** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	8.0		10.00		80.4	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **lcs-43941** SampType: **LCS4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **43941** RunNo: **58873**
Prep Date: **3/28/2019** Analysis Date: **4/3/2019** SeqNo: **1978884** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	100	10	100.0	0	103	53.7	109			
Acenaphthylene	100	10	100.0	0	102	52.1	107			
Aniline	100	10	100.0	0	101	21.2	108			
Anthracene	110	10	100.0	0	111	54.3	105			S
Azobenzene	110	10	100.0	0	114	55	117			
Benz(a)anthracene	100	10	100.0	0	101	55.4	118			
Benzo(a)pyrene	110	10	100.0	0	111	62.1	115			
Benzo(b)fluoranthene	110	10	100.0	0	113	64.2	115			
Benzo(g,h,i)perylene	110	10	100.0	0	109	61	113			
Benzo(k)fluoranthene	110	10	100.0	0	109	56.6	118			
Benzoic acid	55	20	100.0	0	55.2	15	107			
Benzyl alcohol	110	10	100.0	0	112	44.9	110			S
Bis(2-chloroethoxy)methane	110	10	100.0	0	115	43	109			S
Bis(2-chloroethyl)ether	110	10	100.0	0	115	44.2	106			S
Bis(2-chloroisopropyl)ether	110	10	100.0	0	109	29.4	110			
Bis(2-ethylhexyl)phthalate	120	10	100.0	0	122	47.5	125			
4-Bromophenyl phenyl ether	110	10	100.0	0	110	54.5	112			
Butyl benzyl phthalate	110	10	100.0	0	113	50.9	125			
Carbazole	110	10	100.0	0	107	58.8	110			
4-Chloro-3-methylphenol	120	10	100.0	0	120	48.2	116			S
4-Chloroaniline	120	10	100.0	0	117	40.9	113			S
2-Chloronaphthalene	98	10	100.0	0	98.3	45.7	108			
2-Chlorophenol	110	10	100.0	0	110	43.2	110			S
4-Chlorophenyl phenyl ether	96	10	100.0	0	96.4	53.4	112			
Chrysene	110	10	100.0	0	106	50.6	123			
Di-n-butyl phthalate	100	10	100.0	0	105	56.9	105			
Di-n-octyl phthalate	120	10	100.0	0	115	52.5	122			
Dibenz(a,h)anthracene	110	10	100.0	0	115	62.8	118			
Dibenzofuran	110	10	100.0	0	108	54.7	113			
1,2-Dichlorobenzene	54	10	100.0	0	53.7	25.6	96.9			
1,3-Dichlorobenzene	42	10	100.0	0	41.7	21.3	96.7			
1,4-Dichlorobenzene	46	10	100.0	0	45.9	23.3	97.4			
3,3´-Dichlorobenzidine	100	10	100.0	0	101	62.5	112			
Diethyl phthalate	100	10	100.0	0	104	60.7	106			
Dimethyl phthalate	110	10	100.0	0	108	62.1	105			S
2,4-Dichlorophenol	110	20	100.0	0	111	45.5	112			
2,4-Dimethylphenol	110	10	100.0	0	110	40.5	107			S
4,6-Dinitro-2-methylphenol	100	20	100.0	0	101	54.6	105			
2,4-Dinitrophenol	82	20	100.0	0	82.1	53.8	115			

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **lcs-43941**	SampType: **LCS4**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC**	Batch ID: **43941**	RunNo: **58873**
Prep Date: **3/28/2019**	Analysis Date: **4/3/2019**	SeqNo: **1978884** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	110	10	100.0	0	106	62	105			S
2,6-Dinitrotoluene	110	10	100.0	0	110	62.1	109			S
Fluoranthene	110	10	100.0	0	110	58.8	109			S
Fluorene	100	10	100.0	0	105	58.5	107			
Hexachlorobenzene	110	10	100.0	0	109	58	110			
Hexachlorobutadiene	38	10	100.0	0	37.7	15.1	108			
Hexachlorocyclopentadiene	61	10	100.0	0	60.6	25.1	104			
Hexachloroethane	30	10	100.0	0	30.0	15	100			
Indeno(1,2,3-cd)pyrene	110	10	100.0	0	113	63.7	115			
Isophorone	120	10	100.0	0	116	40.8	114			S
1-Methylnaphthalene	100	10	100.0	0	100	37.4	117			
2-Methylnaphthalene	94	10	100.0	0	93.9	35.1	116			
2-Methylphenol	110	10	100.0	0	107	42.2	111			
3+4-Methylphenol	98	10	100.0	0	98.1	39.2	98.9			
N-Nitrosodi-n-propylamine	110	10	100.0	0	111	38.8	112			
N-Nitrosodimethylamine	100	10	100.0	0	101	28.8	99.7			S
N-Nitrosodiphenylamine	110	10	100.0	0	109	54.5	106			S
Naphthalene	82	10	100.0	0	82.3	34.2	107			
2-Nitroaniline	110	10	100.0	0	115	61.5	109			S
3-Nitroaniline	110	10	100.0	0	110	61.1	108			S
4-Nitroaniline	110	10	100.0	0	106	61.7	107			
Nitrobenzene	120	10	100.0	0	115	39.8	110			S
2-Nitrophenol	110	10	100.0	0	111	45.7	108			S
4-Nitrophenol	64	10	100.0	0	64.1	15	112			
Pentachlorophenol	97	20	100.0	0	97.5	59.3	101			
Phenanthrene	100	10	100.0	0	102	58.7	105			
Phenol	72	10	100.0	0	72.1	15	94.3			
Pyrene	110	10	100.0	0	113	56.8	121			
Pyridine	54	10	100.0	0	53.7	15	82.4			
1,2,4-Trichlorobenzene	61	10	100.0	0	60.5	24.2	109			
2,4,5-Trichlorophenol	110	10	100.0	0	106	55.4	107			
2,4,6-Trichlorophenol	100	10	100.0	0	104	55.8	108			
Surr: 2-Fluorophenol	87		100.0		87.3	15	101			
Surr: Phenol-d5	68		100.0		68.0	15	84.6			
Surr: 2,4,6-Tribromophenol	100		100.0		103	27.8	112			
Surr: Nitrobenzene-d5	110		100.0		114	33	113			S
Surr: 2-Fluorobiphenyl	93		100.0		92.9	26.6	107			
Surr: 4-Terphenyl-d14	110		100.0		110	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **mb-43941**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43941**	RunNo: **58873**
Prep Date: **3/28/2019**	Analysis Date: **4/3/2019**	SeqNo: **1978889** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	9.0	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**
22-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **mb-43941**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **43941**	RunNo: **58873**
Prep Date: **3/28/2019**	Analysis Date: **4/3/2019**	SeqNo: **1978889** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	110		200.0		57.0	15	101			
Surr: Phenol-d5	85		200.0		42.5	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		80.2	27.8	112			
Surr: Nitrobenzene-d5	78		100.0		77.7	33	113			
Surr: 2-Fluorobiphenyl	55		100.0		55.0	26.6	107			
Surr: 4-Terphenyl-d14	73		100.0		72.8	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903C58**

22-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **1903c58-003ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-17**	Batch ID: **G58813**	RunNo: **58813**
Prep Date:	Analysis Date: **4/1/2019**	SeqNo: **1976683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	2.5	25.00	7.000	89.8	70	130			
Surr: BFB	520		500.0		103	70	130			

Sample ID: **1903c58-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-17**	Batch ID: **G58813**	RunNo: **58813**
Prep Date:	Analysis Date: **4/1/2019**	SeqNo: **1976684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	2.5	25.00	7.000	86.2	70	130	3.03	20	
Surr: BFB	510		500.0		103	70	130	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G58813**	RunNo: **58813**
Prep Date:	Analysis Date: **4/1/2019**	SeqNo: **1976710** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.43	0.050	0.5000	0	86.6	70	130			
Surr: BFB	10		10.00		100	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G58813**	RunNo: **58813**
Prep Date:	Analysis Date: **4/1/2019**	SeqNo: **1976711** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		101	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1903C58** RcptNo: **1**

Received By: **Erin Melendrez** **3/26/2019 5:00:00 PM**

Completed By: **Erin Melendrez** **3/27/2019 8:55:58 AM**

Reviewed By: JO 3/28/19

LB: DAD 3/27/19 LB: DAD 3/28/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐

Samples were collected the same day and chilled.

5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☑ No ☐ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ HNO3 No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: DAD 3/28/19 ~~47~~ 45 (<2 or >12 unless noted)

Adjusted? YES

Checked by: DAD 3/28/19

Special Handling (if applicable)

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

Person Notified: Cheryl Johnson Date: 3/24/19

By Whom: Leah Baca Via: ☑ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: Extra EDB sample not listed on COC

Client Instructions: Run COC

16. Additional remarks:

Added approx. 0.5mL. HNO3 to samples 004F, 011F, and 012F for acceptable pH. Held 24 hours prior to analysis.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Yes			
2	11.3	Good	Yes			
3	7.3	Good	Yes			

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Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1903C58** RcptNo: **1**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	5.3	Good	Yes			
5	8.1	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard Rush_____

Project Name:

2019 1ST QTR GW SAMPLING

Project #:

MKTF WELLS

Project Manager:

BRIAN MOORE

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: X Yes ☐ No

Sample Temperature: (5) 0.3°C, 11.3°C, 7.3°C, 5.3°C, 8.1°C

HEAL No. 1903058

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. | 8260B | 8015D (DRO/GRO/MRO) | 8270 + Phenols | WQCC Metals - Total | WQCC Metals - Dissolved (Filtered) | Major Cations/Anions | 8011 FOR EDB | CYANIDE | | |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 24, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 1st QTR GW SAMPLING OrderNo.: 1903D57

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 11 sample(s) on 3/27/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: FIELD BLANK
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 7:00:00 AM
Lab ID: 1903D57-001 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Naphthalene	0.35	0.28	2.0	J	µg/L	1	4/2/2019 5:53:13 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Acetone	4.6	1.2	10	J	µg/L	1	4/2/2019 5:53:13 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 5:53:13 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 5:53:13 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 5:53:13 PM	R58857

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: FIELD BLANK
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 7:00:00 AM
Lab ID: 1903D57-001 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 5:53:13 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 5:53:13 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 5:53:13 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 5:53:13 PM	R58857
Surr: 1,2-Dichloroethane-d4	82.8	0	70-130		%Rec	1	4/2/2019 5:53:13 PM	R58857
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	4/2/2019 5:53:13 PM	R58857
Surr: Dibromofluoromethane	82.9	0	70-130		%Rec	1	4/2/2019 5:53:13 PM	R58857
Surr: Toluene-d8	97.7	0	70-130		%Rec	1	4/2/2019 5:53:13 PM	R58857

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: TRIP BLANK
Project: 2019 1st QTR GW SAMPLING
Collection Date:
Lab ID: 1903D57-002 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Acetone	4.1	1.2	10	J	µg/L	1	4/2/2019 6:21:40 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 6:21:40 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 6:21:40 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 6:21:40 PM	R58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: TRIP BLANK
Project: 2019 1st QTR GW SAMPLING
Collection Date:
Lab ID: 1903D57-002 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 6:21:40 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 6:21:40 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 6:21:40 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 6:21:40 PM	R58857
Surr: 1,2-Dichloroethane-d4	86.0	0	70-130		%Rec	1	4/2/2019 6:21:40 PM	R58857
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	4/2/2019 6:21:40 PM	R58857
Surr: Dibromofluoromethane	84.7	0	70-130		%Rec	1	4/2/2019 6:21:40 PM	R58857
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	4/2/2019 6:21:40 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 6:21:40 PM	G58857
Surr: BFB	104	0	70-130		%Rec	1	4/2/2019 6:21:40 PM	G58857

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 8:30:00 AM
Lab ID: 1903D57-003
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/1/2019 4:43:59 PM	43996
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 5:54:19 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 5:54:19 PM	44015
Surr: DNOP	101	0	70-130		%Rec	1	4/3/2019 5:54:19 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.41	0.25	0.50	J	mg/L	5	3/28/2019 5:15:26 PM	R5874(
Chloride	40	2.5	2.5		mg/L	5	3/28/2019 5:15:26 PM	R5874(
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 5:15:26 PM	R5874(
Bromide	0.36	0.068	0.50	J	mg/L	5	3/28/2019 5:15:26 PM	R5874(
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/28/2019 5:15:26 PM	R5874(
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 5:15:26 PM	R5874(
Sulfate	170	0.32	2.5		mg/L	5	3/28/2019 5:15:26 PM	R5874(
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0027	0.0025	0.020	J	mg/L	1	4/10/2019 6:04:27 PM	B59060
Barium	0.054	0.00065	0.0020		mg/L	1	4/10/2019 6:04:27 PM	B59060
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 6:04:27 PM	B59060
Boron	0.36	0.0045	0.040		mg/L	1	4/10/2019 6:04:27 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 6:04:27 PM	B59060
Calcium	28	0.062	1.0		mg/L	1	4/10/2019 6:04:27 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:04:27 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:04:27 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:04:27 PM	B59060
Iron	0.0089	0.0087	0.020	J	mg/L	1	4/10/2019 6:04:27 PM	B59060
Magnesium	4.6	0.050	1.0		mg/L	1	4/10/2019 6:04:27 PM	B59060
Manganese	0.12	0.00029	0.0020	*	mg/L	1	4/10/2019 6:04:27 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:04:27 PM	B59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 6:04:27 PM	B59060
Potassium	0.50	0.16	1.0	J	mg/L	1	4/10/2019 6:04:27 PM	B59060
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 6:04:27 PM	B59060
Sodium	240	2.1	5.0		mg/L	5	4/5/2019 6:38:38 PM	B58959
Zinc	0.024	0.0023	0.010		mg/L	1	4/10/2019 6:04:27 PM	B59060
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Aluminum	1.4	0.023	0.10	*	mg/L	5	4/1/2019 8:05:01 PM	44011
Barium	0.064	0.00049	0.0020		mg/L	1	4/1/2019 7:56:03 PM	44011
Beryllium	ND	0.00022	0.0020		mg/L	1	4/1/2019 7:56:03 PM	44011
Boron	0.35	0.0018	0.040		mg/L	1	4/1/2019 7:56:03 PM	44011

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 8:30:00 AM
Lab ID: 1903D57-003
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 7:56:03 PM	44011
Chromium	0.0022	0.0012	0.0060	J	mg/L	1	4/1/2019 7:56:03 PM	44011
Cobalt	ND	0.0012	0.0060		mg/L	1	4/1/2019 7:56:03 PM	44011
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 7:56:03 PM	44011
Iron	0.48	0.0061	0.020	*	mg/L	1	4/1/2019 7:56:03 PM	44011
Manganese	0.12	0.000060	0.0020	*	mg/L	1	4/1/2019 7:56:03 PM	44011
Molybdenum	0.0055	0.0021	0.0080	J	mg/L	1	4/1/2019 7:56:03 PM	44011
Nickel	ND	0.0015	0.010		mg/L	1	4/1/2019 7:56:03 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 7:56:03 PM	44011
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 7:56:03 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 7:47:13 PM	A59066
Arsenic	0.0019	0.00010	0.0010		mg/L	1	4/10/2019 7:47:13 PM	A59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 7:47:13 PM	A59066
Selenium	ND	0.00017	0.0010		mg/L	1	4/10/2019 7:47:13 PM	A59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 7:47:13 PM	A59066
Uranium	0.011	0.000075	0.00050		mg/L	1	4/10/2019 7:47:13 PM	A59066
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:13:12 AM	44011
Arsenic	0.0019	0.00031	0.0010		mg/L	1	4/9/2019 11:13:12 AM	44011
Lead	0.00031	0.000026	0.00050	J	mg/L	1	4/9/2019 11:13:12 AM	44011
Selenium	ND	0.00048	0.0010		mg/L	1	4/9/2019 11:13:12 AM	44011
Thallium	0.000064	0.000052	0.00050	J	mg/L	1	4/9/2019 11:13:12 AM	44011
Uranium	0.011	0.000085	0.00050		mg/L	1	4/9/2019 11:13:12 AM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	4/9/2019 2:02:36 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Acenaphthylene	ND	6.2	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Aniline	ND	6.2	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Anthracene	ND	5.7	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Azobenzene	ND	6.7	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/15/2019 9:30:06 PM	44004

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 8:30:00 AM
Lab ID: 1903D57-003
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	6.7	6.3	20	J	µg/L	1	4/15/2019 9:30:06 PM	44004
Benzyl alcohol	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/15/2019 9:30:06 PM	44004
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Carbazole	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/15/2019 9:30:06 PM	44004
4-Chloroaniline	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2-Chlorophenol	ND	5.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Chrysene	ND	6.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Dibenzofuran	ND	6.9	10		µg/L	1	4/15/2019 9:30:06 PM	44004
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Diethyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/15/2019 9:30:06 PM	44004
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/15/2019 9:30:06 PM	44004
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/15/2019 9:30:06 PM	44004
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/15/2019 9:30:06 PM	44004
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Fluoranthene	ND	5.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Fluorene	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Hexachloroethane	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Isophorone	ND	6.2	10		µg/L	1	4/15/2019 9:30:06 PM	44004

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 8:30:00 AM
Lab ID: 1903D57-003
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2-Methylphenol	ND	6.3	10		µg/L	1	4/15/2019 9:30:06 PM	44004
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/15/2019 9:30:06 PM	44004
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/15/2019 9:30:06 PM	44004
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/15/2019 9:30:06 PM	44004
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Naphthalene	ND	5.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2-Nitroaniline	ND	5.9	10		µg/L	1	4/15/2019 9:30:06 PM	44004
3-Nitroaniline	ND	6.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
4-Nitroaniline	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Nitrobenzene	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2-Nitrophenol	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
4-Nitrophenol	ND	5.6	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Pentachlorophenol	ND	5.3	20		µg/L	1	4/15/2019 9:30:06 PM	44004
Phenanthrene	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Phenol	ND	6.0	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Pyrene	ND	6.5	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Pyridine	ND	5.4	10		µg/L	1	4/15/2019 9:30:06 PM	44004
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/15/2019 9:30:06 PM	44004
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/15/2019 9:30:06 PM	44004
Surr: 2-Fluorophenol	45.9	0	15-101		%Rec	1	4/15/2019 9:30:06 PM	44004
Surr: Phenol-d5	32.4	0	15-84.6		%Rec	1	4/15/2019 9:30:06 PM	44004
Surr: 2,4,6-Tribromophenol	56.5	0	27.8-112		%Rec	1	4/15/2019 9:30:06 PM	44004
Surr: Nitrobenzene-d5	62.5	0	33-113		%Rec	1	4/15/2019 9:30:06 PM	44004
Surr: 2-Fluorobiphenyl	48.2	0	26.6-107		%Rec	1	4/15/2019 9:30:06 PM	44004
Surr: 4-Terphenyl-d14	51.2	0	18.7-148		%Rec	1	4/15/2019 9:30:06 PM	44004
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Methyl tert-butyl ether (MTBE)	13	0.46	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2-Dichloroethane (EDC)	0.38	0.19	1.0	J	µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 6:50:20 PM	R58857

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 8:30:00 AM
Lab ID: 1903D57-003 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Acetone	ND	1.2	10		µg/L	1	4/2/2019 6:50:20 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 6:50:20 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 6:50:20 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 6:50:20 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 6:50:20 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 8:30:00 AM
Lab ID: 1903D57-003
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 6:50:20 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 6:50:20 PM	R58857
Surr: 1,2-Dichloroethane-d4	86.0	0	70-130		%Rec	1	4/2/2019 6:50:20 PM	R58857
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	4/2/2019 6:50:20 PM	R58857
Surr: Dibromofluoromethane	82.9	0	70-130		%Rec	1	4/2/2019 6:50:20 PM	R58857
Surr: Toluene-d8	99.1	0	70-130		%Rec	1	4/2/2019 6:50:20 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 6:50:20 PM	G58857
Surr: BFB	99.2	0	70-130		%Rec	1	4/2/2019 6:50:20 PM	G58857

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 9:14:00 AM
Lab ID: 1903D57-004 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	4/1/2019 4:59:05 PM	43996
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 7:00:57 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 7:00:57 PM	44015
Surr: DNOP	103	0	70-130		%Rec	1	4/3/2019 7:00:57 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.50	0.25	0.50	J	mg/L	5	3/28/2019 5:41:08 PM	R5874(
Chloride	28	2.5	2.5		mg/L	5	3/28/2019 5:41:08 PM	R5874(
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 5:41:08 PM	R5874(
Bromide	0.27	0.068	0.50	J	mg/L	5	3/28/2019 5:41:08 PM	R5874(
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/28/2019 5:41:08 PM	R5874(
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 5:41:08 PM	R5874(
Sulfate	140	0.32	2.5		mg/L	5	3/28/2019 5:41:08 PM	R5874(
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0058	0.0025	0.020	J	mg/L	1	4/10/2019 6:06:36 PM	B59060
Barium	0.030	0.00065	0.0020		mg/L	1	4/10/2019 6:06:36 PM	B59060
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 6:06:36 PM	B59060
Boron	0.37	0.0045	0.040		mg/L	1	4/10/2019 6:06:36 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 6:06:36 PM	B59060
Calcium	4.9	0.062	1.0		mg/L	1	4/10/2019 6:06:36 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:06:36 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:06:36 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:06:36 PM	B59060
Iron	0.049	0.0087	0.020		mg/L	1	4/10/2019 6:06:36 PM	B59060
Magnesium	0.63	0.050	1.0	J	mg/L	1	4/10/2019 6:06:36 PM	B59060
Manganese	0.024	0.00029	0.0020		mg/L	1	4/10/2019 6:06:36 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:06:36 PM	B59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 6:06:36 PM	B59060
Potassium	1.3	0.16	1.0		mg/L	1	4/10/2019 6:06:36 PM	B59060
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 6:06:36 PM	B59060
Sodium	230	2.1	5.0		mg/L	5	4/5/2019 6:45:20 PM	B58959
Zinc	0.032	0.0023	0.010		mg/L	1	4/10/2019 6:06:36 PM	B59060
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Aluminum	0.48	0.0046	0.020	*	mg/L	1	4/1/2019 8:07:16 PM	44011
Barium	0.031	0.00049	0.0020		mg/L	1	4/1/2019 8:07:16 PM	44011
Beryllium	ND	0.00022	0.0020		mg/L	1	4/1/2019 8:07:16 PM	44011
Boron	0.36	0.0018	0.040		mg/L	1	4/1/2019 8:07:16 PM	44011

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 9:14:00 AM
Lab ID: 1903D57-004
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:07:16 PM	44011
Chromium	0.0012	0.0012	0.0060	J	mg/L	1	4/1/2019 8:07:16 PM	44011
Cobalt	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:07:16 PM	44011
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 8:07:16 PM	44011
Iron	0.21	0.0061	0.020		mg/L	1	4/1/2019 8:07:16 PM	44011
Manganese	0.027	0.000060	0.0020		mg/L	1	4/1/2019 8:07:16 PM	44011
Molybdenum	0.0055	0.0021	0.0080	J	mg/L	1	4/1/2019 8:07:16 PM	44011
Nickel	0.0025	0.0015	0.010	J	mg/L	1	4/1/2019 8:07:16 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:07:16 PM	44011
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 8:07:16 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 7:49:51 PM	A59066
Arsenic	0.00057	0.00010	0.0010	J	mg/L	1	4/10/2019 7:49:51 PM	A59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 7:49:51 PM	A59066
Selenium	ND	0.00017	0.0010		mg/L	1	4/10/2019 7:49:51 PM	A59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 7:49:51 PM	A59066
Uranium	0.0094	0.000075	0.00050		mg/L	1	4/10/2019 7:49:51 PM	A59066
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:15:19 AM	44011
Arsenic	0.00061	0.00031	0.0010	J	mg/L	1	4/9/2019 11:15:19 AM	44011
Lead	0.000080	0.000026	0.00050	J	mg/L	1	4/9/2019 11:15:19 AM	44011
Selenium	ND	0.00048	0.0010		mg/L	1	4/9/2019 11:15:19 AM	44011
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 11:15:19 AM	44011
Uranium	0.0096	0.000085	0.00050		mg/L	1	4/9/2019 11:15:19 AM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00010	0.000038	0.00020	J	mg/L	1	4/9/2019 2:04:47 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Acenaphthylene	ND	6.2	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Aniline	ND	6.2	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Anthracene	ND	5.7	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Azobenzene	ND	6.7	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/15/2019 9:59:50 PM	44004

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 9:14:00 AM
Lab ID: 1903D57-004
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	6.6	6.3	20	J	µg/L	1	4/15/2019 9:59:50 PM	44004
Benzyl alcohol	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/15/2019 9:59:50 PM	44004
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Carbazole	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/15/2019 9:59:50 PM	44004
4-Chloroaniline	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2-Chlorophenol	ND	5.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Chrysene	ND	6.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Dibenzofuran	ND	6.9	10		µg/L	1	4/15/2019 9:59:50 PM	44004
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Diethyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/15/2019 9:59:50 PM	44004
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/15/2019 9:59:50 PM	44004
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/15/2019 9:59:50 PM	44004
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/15/2019 9:59:50 PM	44004
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Fluoranthene	ND	5.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Fluorene	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Hexachloroethane	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Isophorone	ND	6.2	10		µg/L	1	4/15/2019 9:59:50 PM	44004

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 9:14:00 AM
Lab ID: 1903D57-004
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2-Methylphenol	ND	6.3	10		µg/L	1	4/15/2019 9:59:50 PM	44004
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/15/2019 9:59:50 PM	44004
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/15/2019 9:59:50 PM	44004
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/15/2019 9:59:50 PM	44004
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Naphthalene	ND	5.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2-Nitroaniline	ND	5.9	10		µg/L	1	4/15/2019 9:59:50 PM	44004
3-Nitroaniline	ND	6.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
4-Nitroaniline	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Nitrobenzene	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2-Nitrophenol	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
4-Nitrophenol	ND	5.6	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Pentachlorophenol	ND	5.3	20		µg/L	1	4/15/2019 9:59:50 PM	44004
Phenanthrene	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Phenol	ND	6.0	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Pyrene	ND	6.5	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Pyridine	ND	5.4	10		µg/L	1	4/15/2019 9:59:50 PM	44004
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/15/2019 9:59:50 PM	44004
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/15/2019 9:59:50 PM	44004
Surr: 2-Fluorophenol	49.0	0	15-101		%Rec	1	4/15/2019 9:59:50 PM	44004
Surr: Phenol-d5	34.7	0	15-84.6		%Rec	1	4/15/2019 9:59:50 PM	44004
Surr: 2,4,6-Tribromophenol	68.5	0	27.8-112		%Rec	1	4/15/2019 9:59:50 PM	44004
Surr: Nitrobenzene-d5	66.6	0	33-113		%Rec	1	4/15/2019 9:59:50 PM	44004
Surr: 2-Fluorobiphenyl	57.1	0	26.6-107		%Rec	1	4/15/2019 9:59:50 PM	44004
Surr: 4-Terphenyl-d14	58.6	0	18.7-148		%Rec	1	4/15/2019 9:59:50 PM	44004
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Methyl tert-butyl ether (MTBE)	1.6	0.46	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2-Dichloroethane (EDC)	0.35	0.19	1.0	J	µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 7:18:50 PM	R58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 9:14:00 AM
Lab ID: 1903D57-004 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Acetone	4.3	1.2	10	J	µg/L	1	4/2/2019 7:18:50 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 7:18:50 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 7:18:50 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 7:18:50 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 7:18:50 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857

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CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 9:14:00 AM
Lab ID: 1903D57-004 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 7:18:50 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 7:18:50 PM	R58857
Surr: 1,2-Dichloroethane-d4	86.3	0	70-130		%Rec	1	4/2/2019 7:18:50 PM	R58857
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	4/2/2019 7:18:50 PM	R58857
Surr: Dibromofluoromethane	84.3	0	70-130		%Rec	1	4/2/2019 7:18:50 PM	R58857
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	4/2/2019 7:18:50 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 7:18:50 PM	G58857
Surr: BFB	98.9	0	70-130		%Rec	1	4/2/2019 7:18:50 PM	G58857

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: BW-5C
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 11:16:00 AM
Lab ID: 1903D57-005 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 7:22:54 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 7:22:54 PM	44015
Surr: DNOP	102	0	70-130		%Rec	1	4/3/2019 7:22:54 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	3/28/2019 6:06:51 PM	R5874C
Chloride	1400	50	50		mg/L	100	4/8/2019 2:31:47 PM	R5899E
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 6:06:51 PM	R5874C
Bromide	1.0	0.068	0.50		mg/L	5	3/28/2019 6:06:51 PM	R5874C
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/28/2019 6:06:51 PM	R5874C
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 6:06:51 PM	R5874C
Sulfate	230	0.32	2.5		mg/L	5	3/28/2019 6:06:51 PM	R5874C
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0034	0.0025	0.020	J	mg/L	1	4/10/2019 6:47:26 PM	B59060
Barium	0.093	0.00065	0.0020		mg/L	1	4/10/2019 6:47:26 PM	B59060
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 6:47:26 PM	B59060
Boron	0.50	0.0045	0.040		mg/L	1	4/10/2019 6:47:26 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 6:47:26 PM	B59060
Calcium	59	0.062	1.0		mg/L	1	4/10/2019 6:47:26 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:47:26 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:47:26 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:47:26 PM	B59060
Iron	0.47	0.0087	0.020	*	mg/L	1	4/10/2019 6:47:26 PM	B59060
Magnesium	7.4	0.050	1.0		mg/L	1	4/10/2019 6:47:26 PM	B59060
Manganese	0.031	0.00029	0.0020		mg/L	1	4/10/2019 6:47:26 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:47:26 PM	B59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 6:47:26 PM	B59060
Potassium	3.0	0.16	1.0		mg/L	1	4/10/2019 6:47:26 PM	B59060
Silver	0.00098	0.00094	0.0050	J	mg/L	1	4/10/2019 6:47:26 PM	B59060
Sodium	1000	21	50		mg/L	50	4/5/2019 7:03:31 PM	B58959
Zinc	0.026	0.0023	0.010		mg/L	1	4/10/2019 6:47:26 PM	B59060
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Aluminum	4.2	0.023	0.10	*	mg/L	5	4/1/2019 8:13:34 PM	44011
Barium	0.12	0.00049	0.0020		mg/L	1	4/1/2019 8:11:31 PM	44011
Beryllium	ND	0.00022	0.0020		mg/L	1	4/1/2019 8:11:31 PM	44011
Boron	0.51	0.0018	0.040		mg/L	1	4/1/2019 8:11:31 PM	44011
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:11:31 PM	44011
Chromium	0.0016	0.0012	0.0060	J	mg/L	1	4/1/2019 8:11:31 PM	44011
Cobalt	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:11:31 PM	44011

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 8:11:31 PM	44011
Iron	1.7	0.030	0.10	*	mg/L	5	4/1/2019 8:13:34 PM	44011
Manganese	0.047	0.000060	0.0020		mg/L	1	4/1/2019 8:11:31 PM	44011
Molybdenum	ND	0.0021	0.0080		mg/L	1	4/1/2019 8:11:31 PM	44011
Nickel	0.0043	0.0015	0.010	J	mg/L	1	4/1/2019 8:11:31 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:11:31 PM	44011
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 8:11:31 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 7:52:28 PM	A59066
Arsenic	0.00032	0.00010	0.0010	J	mg/L	1	4/10/2019 7:52:28 PM	A59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 7:52:28 PM	A59066
Selenium	0.0011	0.00017	0.0010		mg/L	1	4/10/2019 7:52:28 PM	A59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 7:52:28 PM	A59066
Uranium	0.040	0.00037	0.0025	*	mg/L	5	4/11/2019 8:32:46 PM	A59102
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00078	0.0050		mg/L	5	4/9/2019 5:25:53 PM	44011
Arsenic	0.00038	0.00031	0.0010	J	mg/L	1	4/9/2019 11:17:27 AM	44011
Lead	0.00061	0.000026	0.00050		mg/L	1	4/9/2019 11:17:27 AM	44011
Selenium	0.00085	0.00048	0.0010	J	mg/L	1	4/9/2019 11:17:27 AM	44011
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 11:17:27 AM	44011
Uranium	0.044	0.00042	0.0025	*	mg/L	5	4/9/2019 5:25:53 PM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00026	0.000038	0.00020		mg/L	1	4/9/2019 2:06:58 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Acenaphthylene	ND	6.2	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Aniline	ND	6.2	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Anthracene	ND	5.7	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Azobenzene	ND	6.7	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Benzoic acid	8.5	6.3	20	J	µg/L	1	4/15/2019 10:29:34 PM	44004
Benzyl alcohol	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/15/2019 10:29:34 PM	44004

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/15/2019 10:29:34 PM	44004
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Carbazole	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/15/2019 10:29:34 PM	44004
4-Chloroaniline	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2-Chlorophenol	ND	5.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Chrysene	ND	6.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Dibenzofuran	ND	6.9	10		µg/L	1	4/15/2019 10:29:34 PM	44004
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Diethyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/15/2019 10:29:34 PM	44004
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/15/2019 10:29:34 PM	44004
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/15/2019 10:29:34 PM	44004
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/15/2019 10:29:34 PM	44004
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Fluoranthene	ND	5.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Fluorene	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Hexachloroethane	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Isophorone	ND	6.2	10		µg/L	1	4/15/2019 10:29:34 PM	44004
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2-Methylphenol	ND	6.3	10		µg/L	1	4/15/2019 10:29:34 PM	44004

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/15/2019 10:29:34 PM	44004
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/15/2019 10:29:34 PM	44004
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/15/2019 10:29:34 PM	44004
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Naphthalene	ND	5.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2-Nitroaniline	ND	5.9	10		µg/L	1	4/15/2019 10:29:34 PM	44004
3-Nitroaniline	ND	6.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
4-Nitroaniline	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Nitrobenzene	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2-Nitrophenol	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
4-Nitrophenol	ND	5.6	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Pentachlorophenol	ND	5.3	20		µg/L	1	4/15/2019 10:29:34 PM	44004
Phenanthrene	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Phenol	ND	6.0	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Pyrene	ND	6.5	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Pyridine	ND	5.4	10		µg/L	1	4/15/2019 10:29:34 PM	44004
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/15/2019 10:29:34 PM	44004
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/15/2019 10:29:34 PM	44004
Surr: 2-Fluorophenol	38.5	0	15-101		%Rec	1	4/15/2019 10:29:34 PM	44004
Surr: Phenol-d5	27.8	0	15-84.6		%Rec	1	4/15/2019 10:29:34 PM	44004
Surr: 2,4,6-Tribromophenol	52.6	0	27.8-112		%Rec	1	4/15/2019 10:29:34 PM	44004
Surr: Nitrobenzene-d5	50.5	0	33-113		%Rec	1	4/15/2019 10:29:34 PM	44004
Surr: 2-Fluorobiphenyl	44.8	0	26.6-107		%Rec	1	4/15/2019 10:29:34 PM	44004
Surr: 4-Terphenyl-d14	45.1	0	18.7-148		%Rec	1	4/15/2019 10:29:34 PM	44004
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Methyl tert-butyl ether (MTBE)	25	0.46	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2-Dichloroethane (EDC)	0.52	0.19	1.0	J	µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Acetone	5.5	1.2	10	J	µg/L	1	4/2/2019 7:47:26 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 7:47:26 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 7:47:26 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,1-Dichloroethane	0.67	0.14	1.0	J	µg/L	1	4/2/2019 7:47:26 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 7:47:26 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 7:47:26 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 11:16:00 AM
Lab ID: 1903D57-005 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 7:47:26 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 7:47:26 PM	R58857
Surr: 1,2-Dichloroethane-d4	85.7	0	70-130		%Rec	1	4/2/2019 7:47:26 PM	R58857
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	4/2/2019 7:47:26 PM	R58857
Surr: Dibromofluoromethane	82.6	0	70-130		%Rec	1	4/2/2019 7:47:26 PM	R58857
Surr: Toluene-d8	95.9	0	70-130		%Rec	1	4/2/2019 7:47:26 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 7:47:26 PM	G58857
Surr: BFB	99.9	0	70-130		%Rec	1	4/2/2019 7:47:26 PM	G58857

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 10:26:00 AM
Lab ID: 1903D57-006 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 7:45:04 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 7:45:04 PM	44015
Surr: DNOP	98.7	0	70-130		%Rec	1	4/3/2019 7:45:04 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	3/28/2019 6:32:36 PM	R58740
Chloride	340	10	10		mg/L	20	3/28/2019 6:45:28 PM	R58740
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 6:32:36 PM	R58740
Bromide	0.43	0.068	0.50	J	mg/L	5	3/28/2019 6:32:36 PM	R58740
Nitrogen, Nitrate (As N)	0.16	0.14	0.50	J	mg/L	5	3/28/2019 6:32:36 PM	R58740
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 6:32:36 PM	R58740
Sulfate	96	0.32	2.5		mg/L	5	3/28/2019 6:32:36 PM	R58740
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 6:24:00 PM	B59060
Barium	0.099	0.00065	0.0020		mg/L	1	4/12/2019 8:15:29 PM	A59128
Beryllium	ND	0.00028	0.0020		mg/L	1	4/12/2019 8:15:29 PM	A59128
Boron	0.50	0.0045	0.040		mg/L	1	4/12/2019 8:15:29 PM	A59128
Cadmium	ND	0.00055	0.0020		mg/L	1	4/12/2019 8:15:29 PM	A59128
Calcium	5.8	0.31	5.0		mg/L	5	4/5/2019 7:05:47 PM	B58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/12/2019 8:15:29 PM	A59128
Cobalt	ND	0.0031	0.0060		mg/L	1	4/12/2019 8:15:29 PM	A59128
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:24:00 PM	B59060
Iron	0.021	0.0087	0.020		mg/L	1	4/12/2019 8:15:29 PM	A59128
Magnesium	0.44	0.050	1.0	J	mg/L	1	4/12/2019 8:15:29 PM	A59128
Manganese	0.0018	0.00029	0.0020	J	mg/L	1	4/12/2019 8:15:29 PM	A59128
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/12/2019 8:15:29 PM	A59128
Nickel	0.015	0.0040	0.010		mg/L	1	4/12/2019 8:15:29 PM	A59128
Potassium	1.0	0.16	1.0		mg/L	1	4/12/2019 8:15:29 PM	A59128
Silver	0.0013	0.00094	0.0050	J	mg/L	1	4/10/2019 6:24:00 PM	B59060
Sodium	400	2.1	5.0		mg/L	5	4/5/2019 7:05:47 PM	B58959
Zinc	0.034	0.0023	0.010		mg/L	1	4/12/2019 8:15:29 PM	A59128
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Aluminum	0.27	0.0046	0.020	*	mg/L	1	4/1/2019 8:15:45 PM	44011
Barium	0.092	0.00049	0.0020		mg/L	1	4/1/2019 8:15:45 PM	44011
Beryllium	ND	0.00022	0.0020		mg/L	1	4/1/2019 8:15:45 PM	44011
Boron	0.44	0.0018	0.040		mg/L	1	4/1/2019 8:15:45 PM	44011
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:15:45 PM	44011
Chromium	0.0019	0.0012	0.0060	J	mg/L	1	4/1/2019 8:15:45 PM	44011
Cobalt	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:15:45 PM	44011

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 10:26:00 AM
Lab ID: 1903D57-006
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 8:15:45 PM	44011
Iron	0.11	0.0061	0.020		mg/L	1	4/1/2019 8:15:45 PM	44011
Manganese	0.0035	0.000060	0.0020		mg/L	1	4/1/2019 8:15:45 PM	44011
Molybdenum	0.0033	0.0021	0.0080	J	mg/L	1	4/1/2019 8:15:45 PM	44011
Nickel	0.0028	0.0015	0.010	J	mg/L	1	4/1/2019 8:15:45 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:15:45 PM	44011
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 8:15:45 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 7:55:05 PM	A59066
Arsenic	0.0028	0.00010	0.0010		mg/L	1	4/10/2019 7:55:05 PM	A59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 7:55:05 PM	A59066
Selenium	0.0022	0.00017	0.0010		mg/L	1	4/10/2019 7:55:05 PM	A59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 7:55:05 PM	A59066
Uranium	0.035	0.00037	0.0025	*	mg/L	5	4/11/2019 8:35:23 PM	A59102
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:19:34 AM	44011
Arsenic	0.0027	0.00031	0.0010		mg/L	1	4/9/2019 11:19:34 AM	44011
Lead	0.000071	0.000026	0.00050	J	mg/L	1	4/9/2019 11:19:34 AM	44011
Selenium	0.0017	0.00048	0.0010		mg/L	1	4/9/2019 11:19:34 AM	44011
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 11:19:34 AM	44011
Uranium	0.039	0.00042	0.0025	*	mg/L	5	4/9/2019 5:28:00 PM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00013	0.000038	0.00020	J	mg/L	1	4/9/2019 2:09:10 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Acenaphthylene	ND	6.2	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Aniline	ND	6.2	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Anthracene	ND	5.7	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Azobenzene	ND	6.7	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Benzoic acid	ND	6.3	20		µg/L	1	4/15/2019 10:59:16 PM	44004
Benzyl alcohol	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/15/2019 10:59:16 PM	44004

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 10:26:00 AM
Lab ID: 1903D57-006
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/15/2019 10:59:16 PM	44004
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Carbazole	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/15/2019 10:59:16 PM	44004
4-Chloroaniline	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2-Chlorophenol	ND	5.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Chrysene	ND	6.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Dibenzofuran	ND	6.9	10		µg/L	1	4/15/2019 10:59:16 PM	44004
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Diethyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/15/2019 10:59:16 PM	44004
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/15/2019 10:59:16 PM	44004
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/15/2019 10:59:16 PM	44004
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/15/2019 10:59:16 PM	44004
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Fluoranthene	ND	5.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Fluorene	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Hexachloroethane	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Isophorone	ND	6.2	10		µg/L	1	4/15/2019 10:59:16 PM	44004
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2-Methylphenol	ND	6.3	10		µg/L	1	4/15/2019 10:59:16 PM	44004

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Qualifiers:

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PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 10:26:00 AM
Lab ID: 1903D57-006 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/15/2019 10:59:16 PM	44004
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/15/2019 10:59:16 PM	44004
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/15/2019 10:59:16 PM	44004
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Naphthalene	ND	5.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2-Nitroaniline	ND	5.9	10		µg/L	1	4/15/2019 10:59:16 PM	44004
3-Nitroaniline	ND	6.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
4-Nitroaniline	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Nitrobenzene	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2-Nitrophenol	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
4-Nitrophenol	ND	5.6	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Pentachlorophenol	ND	5.3	20		µg/L	1	4/15/2019 10:59:16 PM	44004
Phenanthrene	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Phenol	ND	6.0	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Pyrene	ND	6.5	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Pyridine	ND	5.4	10		µg/L	1	4/15/2019 10:59:16 PM	44004
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/15/2019 10:59:16 PM	44004
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/15/2019 10:59:16 PM	44004
Surr: 2-Fluorophenol	41.7	0	15-101		%Rec	1	4/15/2019 10:59:16 PM	44004
Surr: Phenol-d5	28.3	0	15-84.6		%Rec	1	4/15/2019 10:59:16 PM	44004
Surr: 2,4,6-Tribromophenol	58.6	0	27.8-112		%Rec	1	4/15/2019 10:59:16 PM	44004
Surr: Nitrobenzene-d5	61.9	0	33-113		%Rec	1	4/15/2019 10:59:16 PM	44004
Surr: 2-Fluorobiphenyl	52.5	0	26.6-107		%Rec	1	4/15/2019 10:59:16 PM	44004
Surr: 4-Terphenyl-d14	51.9	0	18.7-148		%Rec	1	4/15/2019 10:59:16 PM	44004
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Methyl tert-butyl ether (MTBE)	1.1	0.46	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Acetone	4.2	1.2	10	J	µg/L	1	4/2/2019 8:16:07 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 10:26:00 AM
Lab ID: 1903D57-006 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 8:16:07 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 8:16:07 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 8:16:07 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 8:16:07 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 10:26:00 AM
Lab ID: 1903D57-006 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 8:16:07 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 8:16:07 PM	R58857
Surr: 1,2-Dichloroethane-d4	84.5	0	70-130		%Rec	1	4/2/2019 8:16:07 PM	R58857
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	4/2/2019 8:16:07 PM	R58857
Surr: Dibromofluoromethane	83.0	0	70-130		%Rec	1	4/2/2019 8:16:07 PM	R58857
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	4/2/2019 8:16:07 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 8:16:07 PM	G58857
Surr: BFB	103	0	70-130		%Rec	1	4/2/2019 8:16:07 PM	G58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 1:20:00 PM
Lab ID: 1903D57-007
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 8:07:00 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 8:07:00 PM	44015
Surr: DNOP	102	0	70-130		%Rec	1	4/3/2019 8:07:00 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.25	0.50		mg/L	5	3/28/2019 6:58:19 PM	R5874(
Chloride	84	2.5	2.5		mg/L	5	3/28/2019 6:58:19 PM	R5874(
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 6:58:19 PM	R5874(
Bromide	0.40	0.068	0.50	J	mg/L	5	3/28/2019 6:58:19 PM	R5874(
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	3/28/2019 6:58:19 PM	R5874(
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 6:58:19 PM	R5874(
Sulfate	220	1.3	10		mg/L	20	3/28/2019 7:11:10 PM	R5874(
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.014	0.0025	0.020	J	mg/L	1	4/10/2019 6:26:09 PM	B59060
Barium	0.096	0.00065	0.0020		mg/L	1	4/10/2019 6:26:09 PM	B59060
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 6:26:09 PM	B59060
Boron	0.47	0.0045	0.040		mg/L	1	4/10/2019 6:26:09 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 6:26:09 PM	B59060
Calcium	4.3	0.062	1.0		mg/L	1	4/10/2019 6:26:09 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:26:09 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:26:09 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:26:09 PM	B59060
Iron	0.0097	0.0087	0.020	J	mg/L	1	4/10/2019 6:26:09 PM	B59060
Magnesium	0.42	0.050	1.0	J	mg/L	1	4/10/2019 6:26:09 PM	B59060
Manganese	0.0016	0.00029	0.0020	J	mg/L	1	4/10/2019 6:26:09 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:26:09 PM	B59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 6:26:09 PM	B59060
Potassium	1.0	0.16	1.0		mg/L	1	4/10/2019 6:26:09 PM	B59060
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 6:26:09 PM	B59060
Sodium	390	2.1	5.0		mg/L	5	4/5/2019 7:12:06 PM	B58959
Zinc	0.028	0.0023	0.010		mg/L	1	4/10/2019 6:26:09 PM	B59060
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	12	0.23	1.0	*	mg/L	50	4/3/2019 5:50:15 PM	44011
Barium	0.16	0.00049	0.0020		mg/L	1	4/1/2019 8:20:03 PM	44011
Beryllium	0.00092	0.00022	0.0020	J	mg/L	1	4/1/2019 8:20:03 PM	44011
Boron	2.2	0.0091	0.20		mg/L	5	4/1/2019 8:21:56 PM	44011
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:20:03 PM	44011
Chromium	0.021	0.0012	0.0060		mg/L	1	4/1/2019 8:20:03 PM	44011
Cobalt	0.0035	0.0012	0.0060	J	mg/L	1	4/1/2019 8:20:03 PM	44011

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 1:20:00 PM
Lab ID: 1903D57-007
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Copper	0.0091	0.0041	0.0060		mg/L	1	4/1/2019 8:20:03 PM	44011
Iron	5.7	0.30	1.0	*	mg/L	50	4/3/2019 5:50:15 PM	44011
Manganese	0.13	0.000060	0.0020	*	mg/L	1	4/1/2019 8:20:03 PM	44011
Molybdenum	0.024	0.0021	0.0080		mg/L	1	4/1/2019 8:20:03 PM	44011
Nickel	0.018	0.0015	0.010		mg/L	1	4/1/2019 8:20:03 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:20:03 PM	44011
Zinc	0.018	0.0058	0.010		mg/L	1	4/1/2019 8:20:03 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 7:57:42 PM	A59066
Arsenic	0.011	0.00010	0.0010	*	mg/L	1	4/10/2019 7:57:42 PM	A59066
Lead	0.00097	0.000055	0.00050		mg/L	1	4/10/2019 7:57:42 PM	A59066
Selenium	0.00019	0.00017	0.0010	J	mg/L	1	4/10/2019 7:57:42 PM	A59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 7:57:42 PM	A59066
Uranium	0.057	0.00037	0.0025	*	mg/L	5	4/11/2019 8:38:00 PM	A59102
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:21:41 AM	44011
Arsenic	0.012	0.00031	0.0010	*	mg/L	1	4/9/2019 11:21:41 AM	44011
Lead	0.0035	0.000026	0.00050		mg/L	1	4/9/2019 11:21:41 AM	44011
Selenium	0.00091	0.00048	0.0010	J	mg/L	1	4/9/2019 11:21:41 AM	44011
Thallium	0.000065	0.000052	0.00050	J	mg/L	1	4/9/2019 11:21:41 AM	44011
Uranium	0.059	0.00042	0.0025	*	mg/L	5	4/9/2019 5:30:08 PM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	4/9/2019 2:16:00 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Acenaphthylene	ND	6.2	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Aniline	ND	6.2	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Anthracene	ND	5.7	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Azobenzene	ND	6.7	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Benzoic acid	6.7	6.3	20	J	µg/L	1	4/15/2019 11:28:50 PM	44004
Benzyl alcohol	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/15/2019 11:28:50 PM	44004

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 1:20:00 PM
Lab ID: 1903D57-007
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/15/2019 11:28:50 PM	44004
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Carbazole	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/15/2019 11:28:50 PM	44004
4-Chloroaniline	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2-Chlorophenol	ND	5.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Chrysene	ND	6.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Dibenzofuran	ND	6.9	10		µg/L	1	4/15/2019 11:28:50 PM	44004
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Diethyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/15/2019 11:28:50 PM	44004
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/15/2019 11:28:50 PM	44004
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/15/2019 11:28:50 PM	44004
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/15/2019 11:28:50 PM	44004
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Fluoranthene	ND	5.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Fluorene	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Hexachloroethane	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Isophorone	ND	6.2	10		µg/L	1	4/15/2019 11:28:50 PM	44004
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2-Methylphenol	ND	6.3	10		µg/L	1	4/15/2019 11:28:50 PM	44004

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 1:20:00 PM
Lab ID: 1903D57-007
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/15/2019 11:28:50 PM	44004
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/15/2019 11:28:50 PM	44004
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/15/2019 11:28:50 PM	44004
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Naphthalene	ND	5.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2-Nitroaniline	ND	5.9	10		µg/L	1	4/15/2019 11:28:50 PM	44004
3-Nitroaniline	ND	6.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
4-Nitroaniline	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Nitrobenzene	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2-Nitrophenol	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
4-Nitrophenol	ND	5.6	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Pentachlorophenol	ND	5.3	20		µg/L	1	4/15/2019 11:28:50 PM	44004
Phenanthrene	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Phenol	ND	6.0	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Pyrene	ND	6.5	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Pyridine	ND	5.4	10		µg/L	1	4/15/2019 11:28:50 PM	44004
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/15/2019 11:28:50 PM	44004
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/15/2019 11:28:50 PM	44004
Surr: 2-Fluorophenol	41.2	0	15-101		%Rec	1	4/15/2019 11:28:50 PM	44004
Surr: Phenol-d5	30.6	0	15-84.6		%Rec	1	4/15/2019 11:28:50 PM	44004
Surr: 2,4,6-Tribromophenol	58.9	0	27.8-112		%Rec	1	4/15/2019 11:28:50 PM	44004
Surr: Nitrobenzene-d5	56.2	0	33-113		%Rec	1	4/15/2019 11:28:50 PM	44004
Surr: 2-Fluorobiphenyl	48.8	0	26.6-107		%Rec	1	4/15/2019 11:28:50 PM	44004
Surr: 4-Terphenyl-d14	48.4	0	18.7-148		%Rec	1	4/15/2019 11:28:50 PM	44004
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Acetone	4.6	1.2	10	J	µg/L	1	4/2/2019 8:44:38 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 1:20:00 PM
Lab ID: 1903D57-007
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 8:44:38 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 8:44:38 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 8:44:38 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 8:44:38 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 1:20:00 PM
Lab ID: 1903D57-007
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 8:44:38 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 8:44:38 PM	R58857
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	1	4/2/2019 8:44:38 PM	R58857
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	4/2/2019 8:44:38 PM	R58857
Surr: Dibromofluoromethane	85.3	0	70-130		%Rec	1	4/2/2019 8:44:38 PM	R58857
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	4/2/2019 8:44:38 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 8:44:38 PM	G58857
Surr: BFB	101	0	70-130		%Rec	1	4/2/2019 8:44:38 PM	G58857

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 12:51:00 PM
Lab ID: 1903D57-008
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	4/1/2019 5:14:15 PM	43996
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 8:29:13 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 8:29:13 PM	44015
Surr: DNOP	99.3	0	70-130		%Rec	1	4/3/2019 8:29:13 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.29	0.25	0.50	J	mg/L	5	3/28/2019 7:49:44 PM	R5874C
Chloride	98	10	10		mg/L	20	3/28/2019 8:02:35 PM	R5874C
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 7:49:44 PM	R5874C
Bromide	0.31	0.068	0.50	J	mg/L	5	3/28/2019 7:49:44 PM	R5874C
Nitrogen, Nitrate (As N)	0.30	0.14	0.50	J	mg/L	5	3/28/2019 7:49:44 PM	R5874C
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 7:49:44 PM	R5874C
Sulfate	170	0.32	2.5		mg/L	5	3/28/2019 7:49:44 PM	R5874C
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	4/5/2019 7:18:51 PM	B58959
Barium	0.038	0.00065	0.0020		mg/L	1	4/12/2019 8:19:45 PM	A59128
Beryllium	ND	0.00028	0.0020		mg/L	1	4/12/2019 8:19:45 PM	A59128
Boron	0.38	0.0045	0.040		mg/L	1	4/12/2019 8:19:45 PM	A59128
Cadmium	ND	0.00055	0.0020		mg/L	1	4/12/2019 8:19:45 PM	A59128
Calcium	2.6	0.062	1.0		mg/L	1	4/12/2019 8:19:45 PM	A59128
Chromium	ND	0.0015	0.0060		mg/L	1	4/12/2019 8:19:45 PM	A59128
Cobalt	ND	0.0031	0.0060		mg/L	1	4/12/2019 8:19:45 PM	A59128
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:28:06 PM	B59060
Iron	ND	0.0087	0.020		mg/L	1	4/12/2019 8:19:45 PM	A59128
Magnesium	0.26	0.050	1.0	J	mg/L	1	4/12/2019 8:19:45 PM	A59128
Manganese	0.0029	0.00029	0.0020		mg/L	1	4/12/2019 8:19:45 PM	A59128
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/12/2019 8:19:45 PM	A59128
Nickel	ND	0.0040	0.010		mg/L	1	4/12/2019 8:19:45 PM	A59128
Potassium	0.72	0.16	1.0	J	mg/L	1	4/12/2019 8:19:45 PM	A59128
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 6:28:06 PM	B59060
Sodium	300	2.1	5.0		mg/L	5	4/5/2019 7:18:51 PM	B58959
Zinc	0.051	0.0023	0.010		mg/L	1	4/12/2019 8:19:45 PM	A59128
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Aluminum	0.32	0.0046	0.020	*	mg/L	1	4/1/2019 8:23:42 PM	44011
Barium	0.036	0.00049	0.0020		mg/L	1	4/1/2019 8:23:42 PM	44011
Beryllium	ND	0.00022	0.0020		mg/L	1	4/1/2019 8:23:42 PM	44011
Boron	0.34	0.0018	0.040		mg/L	1	4/1/2019 8:23:42 PM	44011

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 12:51:00 PM
Lab ID: 1903D57-008
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:23:42 PM	44011
Chromium	0.0013	0.0012	0.0060	J	mg/L	1	4/1/2019 8:23:42 PM	44011
Cobalt	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:23:42 PM	44011
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 8:23:42 PM	44011
Iron	0.17	0.0061	0.020		mg/L	1	4/1/2019 8:23:42 PM	44011
Manganese	0.011	0.000060	0.0020		mg/L	1	4/1/2019 8:23:42 PM	44011
Molybdenum	0.0026	0.0021	0.0080	J	mg/L	1	4/1/2019 8:23:42 PM	44011
Nickel	0.0027	0.0015	0.010	J	mg/L	1	4/1/2019 8:23:42 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:23:42 PM	44011
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 8:23:42 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:00:20 PM	A59066
Arsenic	0.00070	0.00010	0.0010	J	mg/L	1	4/10/2019 8:00:20 PM	A59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 8:00:20 PM	A59066
Selenium	0.0023	0.00017	0.0010		mg/L	1	4/10/2019 8:00:20 PM	A59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:00:20 PM	A59066
Uranium	0.036	0.00037	0.0025	*	mg/L	5	4/11/2019 8:45:53 PM	A59102
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:28:06 AM	44011
Arsenic	0.00073	0.00031	0.0010	J	mg/L	1	4/9/2019 11:28:06 AM	44011
Lead	0.00021	0.000026	0.00050	J	mg/L	1	4/9/2019 11:28:06 AM	44011
Selenium	0.0025	0.00048	0.0010		mg/L	1	4/9/2019 11:28:06 AM	44011
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 11:28:06 AM	44011
Uranium	0.037	0.00042	0.0025	*	mg/L	5	4/9/2019 5:36:32 PM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	4/9/2019 2:18:12 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 10:18:26 AM	44061

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: OW-01
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 12:51:00 PM
Lab ID: 1903D57-008
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	6.3	20		µg/L	1	4/16/2019 10:18:26 AM	44061
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 10:18:26 AM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 10:18:26 AM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 10:18:26 AM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 10:18:26 AM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 10:18:26 AM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 10:18:26 AM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 10:18:26 AM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 10:18:26 AM	44061

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 12:51:00 PM
Lab ID: 1903D57-008
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 10:18:26 AM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 10:18:26 AM	44061
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 10:18:26 AM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 10:18:26 AM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 10:18:26 AM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 10:18:26 AM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 10:18:26 AM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 10:18:26 AM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 10:18:26 AM	44061
Surr: 2-Fluorophenol	42.6	0	15-101		%Rec	1	4/16/2019 10:18:26 AM	44061
Surr: Phenol-d5	31.8	0	15-84.6		%Rec	1	4/16/2019 10:18:26 AM	44061
Surr: 2,4,6-Tribromophenol	55.2	0	27.8-112		%Rec	1	4/16/2019 10:18:26 AM	44061
Surr: Nitrobenzene-d5	55.1	0	33-113		%Rec	1	4/16/2019 10:18:26 AM	44061
Surr: 2-Fluorobiphenyl	46.6	0	26.6-107		%Rec	1	4/16/2019 10:18:26 AM	44061
Surr: 4-Terphenyl-d14	58.1	0	18.7-148		%Rec	1	4/16/2019 10:18:26 AM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Methyl tert-butyl ether (MTBE)	7.3	0.46	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2-Dichloroethane (EDC)	0.35	0.19	1.0	J	µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 9:13:02 PM	R58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 12:51:00 PM
Lab ID: 1903D57-008 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Acetone	3.9	1.2	10	J	µg/L	1	4/2/2019 9:13:02 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 9:13:02 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 9:13:02 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,1-Dichloroethane	0.52	0.14	1.0	J	µg/L	1	4/2/2019 9:13:02 PM	R58857
1,1-Dichloroethene	0.37	0.21	1.0	J	µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 9:13:02 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 9:13:02 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857

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Lab ID: 1903D57-008 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 9:13:02 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 9:13:02 PM	R58857
Surr: 1,2-Dichloroethane-d4	87.1	0	70-130		%Rec	1	4/2/2019 9:13:02 PM	R58857
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	4/2/2019 9:13:02 PM	R58857
Surr: Dibromofluoromethane	84.0	0	70-130		%Rec	1	4/2/2019 9:13:02 PM	R58857
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	4/2/2019 9:13:02 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 9:13:02 PM	G58857
Surr: BFB	101	0	70-130		%Rec	1	4/2/2019 9:13:02 PM	G58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 2:51:00 PM
Lab ID: 1903D57-009
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/1/2019 5:29:20 PM	43996
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 8:51:15 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 8:51:15 PM	44015
Surr: DNOP	100	0	70-130		%Rec	1	4/3/2019 8:51:15 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	3/28/2019 8:15:27 PM	R5874C
Chloride	460	25	25		mg/L	50	4/8/2019 2:44:39 PM	R5899E
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 8:15:27 PM	R5874C
Bromide	1.0	0.068	0.50		mg/L	5	3/28/2019 8:15:27 PM	R5874C
Nitrogen, Nitrate (As N)	0.94	0.14	0.50		mg/L	5	3/28/2019 8:15:27 PM	R5874C
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 8:15:27 PM	R5874C
Sulfate	230	0.32	2.5		mg/L	5	3/28/2019 8:15:27 PM	R5874C
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/12/2019 8:34:56 PM	A59128
Barium	0.049	0.00065	0.0020		mg/L	1	4/12/2019 8:34:56 PM	A59128
Beryllium	ND	0.00028	0.0020		mg/L	1	4/12/2019 8:34:56 PM	A59128
Boron	0.58	0.0045	0.040		mg/L	1	4/12/2019 8:34:56 PM	A59128
Cadmium	ND	0.00055	0.0020		mg/L	1	4/12/2019 8:34:56 PM	A59128
Calcium	62	0.31	5.0		mg/L	5	4/5/2019 7:32:18 PM	B58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/12/2019 8:34:56 PM	A59128
Cobalt	ND	0.0031	0.0060		mg/L	1	4/12/2019 8:34:56 PM	A59128
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:30:12 PM	B59060
Iron	ND	0.0087	0.020		mg/L	1	4/12/2019 8:34:56 PM	A59128
Magnesium	9.5	0.050	1.0		mg/L	1	4/12/2019 8:34:56 PM	A59128
Manganese	0.042	0.00029	0.0020		mg/L	1	4/12/2019 8:34:56 PM	A59128
Molybdenum	0.0069	0.0067	0.0080	J	mg/L	1	4/12/2019 8:34:56 PM	A59128
Nickel	0.0044	0.0040	0.010	J	mg/L	1	4/12/2019 8:34:56 PM	A59128
Potassium	1.1	0.16	1.0		mg/L	1	4/12/2019 8:34:56 PM	A59128
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 6:30:12 PM	B59060
Sodium	500	2.1	5.0		mg/L	5	4/5/2019 7:32:18 PM	B58959
Zinc	0.024	0.0023	0.010		mg/L	1	4/12/2019 8:34:56 PM	A59128
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Aluminum	0.0047	0.0046	0.020	J	mg/L	1	4/1/2019 8:34:29 PM	44011
Barium	0.043	0.00049	0.0020		mg/L	1	4/1/2019 8:34:29 PM	44011
Beryllium	ND	0.00022	0.0020		mg/L	1	4/1/2019 8:34:29 PM	44011
Boron	0.52	0.0018	0.040		mg/L	1	4/1/2019 8:34:29 PM	44011

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EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:34:29 PM	44011
Chromium	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:34:29 PM	44011
Cobalt	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:34:29 PM	44011
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 8:34:29 PM	44011
Iron	ND	0.0061	0.020		mg/L	1	4/1/2019 8:34:29 PM	44011
Manganese	0.035	0.000060	0.0020		mg/L	1	4/1/2019 8:34:29 PM	44011
Molybdenum	0.0044	0.0021	0.0080	J	mg/L	1	4/1/2019 8:34:29 PM	44011
Nickel	0.0030	0.0015	0.010	J	mg/L	1	4/1/2019 8:34:29 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:34:29 PM	44011
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 8:34:29 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:16:06 PM	B59066
Arsenic	0.00053	0.00010	0.0010	J	mg/L	1	4/10/2019 8:16:06 PM	B59066
Lead	0.00012	0.000055	0.00050	J	mg/L	1	4/10/2019 8:16:06 PM	B59066
Selenium	0.0083	0.00017	0.0010		mg/L	1	4/10/2019 8:16:06 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:16:06 PM	B59066
Uranium	0.047	0.00037	0.0025	*	mg/L	5	4/11/2019 8:48:30 PM	A59102
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:30:13 AM	44011
Arsenic	0.00052	0.00031	0.0010	J	mg/L	1	4/9/2019 11:30:13 AM	44011
Lead	0.00014	0.000026	0.00050	J	mg/L	1	4/9/2019 11:30:13 AM	44011
Selenium	0.0088	0.00048	0.0010		mg/L	1	4/9/2019 11:30:13 AM	44011
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 11:30:13 AM	44011
Uranium	0.049	0.00042	0.0025	*	mg/L	5	4/9/2019 5:38:39 PM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	4/9/2019 2:20:25 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 11:41:23 AM	44061

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EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	6.3	20		µg/L	1	4/16/2019 11:41:23 AM	44061
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 11:41:23 AM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 11:41:23 AM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 11:41:23 AM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 11:41:23 AM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 11:41:23 AM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 11:41:23 AM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 11:41:23 AM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 11:41:23 AM	44061

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 11:41:23 AM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 11:41:23 AM	44061
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 11:41:23 AM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 11:41:23 AM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 11:41:23 AM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 11:41:23 AM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 11:41:23 AM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 11:41:23 AM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 11:41:23 AM	44061
Surr: 2-Fluorophenol	55.4	0	15-101		%Rec	1	4/16/2019 11:41:23 AM	44061
Surr: Phenol-d5	38.4	0	15-84.6		%Rec	1	4/16/2019 11:41:23 AM	44061
Surr: 2,4,6-Tribromophenol	71.3	0	27.8-112		%Rec	1	4/16/2019 11:41:23 AM	44061
Surr: Nitrobenzene-d5	72.0	0	33-113		%Rec	1	4/16/2019 11:41:23 AM	44061
Surr: 2-Fluorobiphenyl	54.8	0	26.6-107		%Rec	1	4/16/2019 11:41:23 AM	44061
Surr: 4-Terphenyl-d14	68.7	0	18.7-148		%Rec	1	4/16/2019 11:41:23 AM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Methyl tert-butyl ether (MTBE)	1.5	0.46	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 9:41:42 PM	R58857

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Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Acetone	3.8	1.2	10	J	µg/L	1	4/2/2019 9:41:42 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 9:41:42 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 9:41:42 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 9:41:42 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 9:41:42 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 2:51:00 PM
Lab ID: 1903D57-009
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 9:41:42 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 9:41:42 PM	R58857
Surr: 1,2-Dichloroethane-d4	84.4	0	70-130		%Rec	1	4/2/2019 9:41:42 PM	R58857
Surr: 4-Bromofluorobenzene	99.1	0	70-130		%Rec	1	4/2/2019 9:41:42 PM	R58857
Surr: Dibromofluoromethane	82.7	0	70-130		%Rec	1	4/2/2019 9:41:42 PM	R58857
Surr: Toluene-d8	99.7	0	70-130		%Rec	1	4/2/2019 9:41:42 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 9:41:42 PM	G58857
Surr: BFB	101	0	70-130		%Rec	1	4/2/2019 9:41:42 PM	G58857

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 3:00:00 PM
Lab ID: 1903D57-010 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	4/1/2019 5:44:26 PM	43996
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 9:13:18 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 9:13:18 PM	44015
Surr: DNOP	105	0	70-130		%Rec	1	4/3/2019 9:13:18 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	3/28/2019 8:41:11 PM	R5874(
Chloride	500	25	25		mg/L	50	4/8/2019 3:23:15 PM	R5899{
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	3/28/2019 8:41:11 PM	R5874(
Bromide	0.99	0.068	0.50		mg/L	5	3/28/2019 8:41:11 PM	R5874(
Nitrogen, Nitrate (As N)	0.91	0.14	0.50		mg/L	5	3/28/2019 8:41:11 PM	R5874(
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	3/28/2019 8:41:11 PM	R5874(
Sulfate	230	0.32	2.5		mg/L	5	3/28/2019 8:41:11 PM	R5874(
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 6:32:14 PM	B59060
Barium	0.046	0.00065	0.0020		mg/L	1	4/10/2019 6:32:14 PM	B59060
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 6:32:14 PM	B59060
Boron	0.53	0.0045	0.040		mg/L	1	4/10/2019 6:32:14 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 6:32:14 PM	B59060
Calcium	60	0.062	1.0		mg/L	1	4/10/2019 6:32:14 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:32:14 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:32:14 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:32:14 PM	B59060
Iron	ND	0.0087	0.020		mg/L	1	4/10/2019 6:32:14 PM	B59060
Magnesium	9.1	0.050	1.0		mg/L	1	4/10/2019 6:32:14 PM	B59060
Manganese	0.038	0.00029	0.0020		mg/L	1	4/10/2019 6:32:14 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:32:14 PM	B59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 6:32:14 PM	B59060
Potassium	1.1	0.16	1.0		mg/L	1	4/10/2019 6:32:14 PM	B59060
Silver	0.0012	0.00094	0.0050	J	mg/L	1	4/10/2019 6:32:14 PM	B59060
Sodium	490	2.1	5.0		mg/L	5	4/5/2019 7:39:16 PM	B58959
Zinc	0.019	0.0023	0.010		mg/L	1	4/10/2019 6:32:14 PM	B59060
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Aluminum	0.020	0.0046	0.020		mg/L	1	4/1/2019 8:38:54 PM	44011
Barium	0.045	0.00049	0.0020		mg/L	1	4/1/2019 8:38:54 PM	44011
Beryllium	ND	0.00022	0.0020		mg/L	1	4/1/2019 8:38:54 PM	44011
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:38:54 PM	44011

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B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 3:00:00 PM
Lab ID: 1903D57-010
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Calcium	62	0.027	1.0		mg/L	1	4/1/2019 8:38:54 PM	44011
Chromium	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:38:54 PM	44011
Cobalt	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:38:54 PM	44011
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 8:38:54 PM	44011
Iron	0.0094	0.0061	0.020	J	mg/L	1	4/1/2019 8:38:54 PM	44011
Manganese	0.042	0.000060	0.0020		mg/L	1	4/1/2019 8:38:54 PM	44011
Molybdenum	0.0058	0.0021	0.0080	J	mg/L	1	4/1/2019 8:38:54 PM	44011
Nickel	0.0032	0.0015	0.010	J	mg/L	1	4/1/2019 8:38:54 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:38:54 PM	44011
Zinc	ND	0.0058	0.010		mg/L	1	4/1/2019 8:38:54 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:23:58 PM	B59066
Arsenic	0.00046	0.00010	0.0010	J	mg/L	1	4/10/2019 8:23:58 PM	B59066
Lead	0.00012	0.000055	0.00050	J	mg/L	1	4/10/2019 8:23:58 PM	B59066
Selenium	0.0093	0.00017	0.0010		mg/L	1	4/10/2019 8:23:58 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:23:58 PM	B59066
Uranium	0.046	0.00037	0.0025	*	mg/L	5	4/11/2019 8:56:22 PM	A59102
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:32:21 AM	44011
Arsenic	0.00060	0.00031	0.0010	J	mg/L	1	4/9/2019 11:32:21 AM	44011
Lead	0.00015	0.000026	0.00050	J	mg/L	1	4/9/2019 11:32:21 AM	44011
Selenium	0.0079	0.00048	0.0010		mg/L	1	4/9/2019 11:32:21 AM	44011
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 11:32:21 AM	44011
Uranium	0.048	0.00042	0.0025	*	mg/L	5	4/9/2019 5:40:47 PM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	4/9/2019 2:22:39 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Acenaphthylene	ND	6.2	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Aniline	ND	6.2	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Anthracene	ND	5.7	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Azobenzene	ND	6.7	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/15/2019 11:58:22 PM	44004

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 3:00:00 PM
Lab ID: 1903D57-010
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	6.4	6.3	20	J	µg/L	1	4/15/2019 11:58:22 PM	44004
Benzyl alcohol	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/15/2019 11:58:22 PM	44004
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Carbazole	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/15/2019 11:58:22 PM	44004
4-Chloroaniline	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2-Chlorophenol	ND	5.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Chrysene	ND	6.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Dibenzofuran	ND	6.9	10		µg/L	1	4/15/2019 11:58:22 PM	44004
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Diethyl phthalate	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/15/2019 11:58:22 PM	44004
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/15/2019 11:58:22 PM	44004
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/15/2019 11:58:22 PM	44004
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/15/2019 11:58:22 PM	44004
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Fluoranthene	ND	5.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Fluorene	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Hexachloroethane	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Isophorone	ND	6.2	10		µg/L	1	4/15/2019 11:58:22 PM	44004

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 3:00:00 PM
Lab ID: 1903D57-010 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2-Methylphenol	ND	6.3	10		µg/L	1	4/15/2019 11:58:22 PM	44004
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/15/2019 11:58:22 PM	44004
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/15/2019 11:58:22 PM	44004
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/15/2019 11:58:22 PM	44004
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Naphthalene	ND	5.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2-Nitroaniline	ND	5.9	10		µg/L	1	4/15/2019 11:58:22 PM	44004
3-Nitroaniline	ND	6.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
4-Nitroaniline	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Nitrobenzene	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2-Nitrophenol	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
4-Nitrophenol	ND	5.6	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Pentachlorophenol	ND	5.3	20		µg/L	1	4/15/2019 11:58:22 PM	44004
Phenanthrene	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Phenol	ND	6.0	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Pyrene	ND	6.5	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Pyridine	ND	5.4	10		µg/L	1	4/15/2019 11:58:22 PM	44004
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/15/2019 11:58:22 PM	44004
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/15/2019 11:58:22 PM	44004
Surr: 2-Fluorophenol	46.3	0	15-101		%Rec	1	4/15/2019 11:58:22 PM	44004
Surr: Phenol-d5	36.1	0	15-84.6		%Rec	1	4/15/2019 11:58:22 PM	44004
Surr: 2,4,6-Tribromophenol	63.3	0	27.8-112		%Rec	1	4/15/2019 11:58:22 PM	44004
Surr: Nitrobenzene-d5	61.5	0	33-113		%Rec	1	4/15/2019 11:58:22 PM	44004
Surr: 2-Fluorobiphenyl	50.0	0	26.6-107		%Rec	1	4/15/2019 11:58:22 PM	44004
Surr: 4-Terphenyl-d14	56.4	0	18.7-148		%Rec	1	4/15/2019 11:58:22 PM	44004
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Toluene	ND	0.35	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Methyl tert-butyl ether (MTBE)	7.8	0.46	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2-Dichloroethane (EDC)	0.36	0.19	1.0	J	µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Naphthalene	ND	0.28	2.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/2/2019 10:10:22 PM	R58857

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 3:00:00 PM
Lab ID: 1903D57-010
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Acetone	3.7	1.2	10	J	µg/L	1	4/2/2019 10:10:22 PM	R58857
Bromobenzene	ND	0.24	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Bromoform	ND	0.29	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Bromomethane	ND	0.27	3.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
2-Butanone	ND	2.1	10		µg/L	1	4/2/2019 10:10:22 PM	R58857
Carbon disulfide	ND	0.45	10		µg/L	1	4/2/2019 10:10:22 PM	R58857
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Chloroethane	ND	0.18	2.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Chloroform	ND	0.12	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Chloromethane	ND	0.32	3.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Dibromomethane	ND	0.21	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,1-Dichloroethane	0.55	0.14	1.0	J	µg/L	1	4/2/2019 10:10:22 PM	R58857
1,1-Dichloroethene	0.38	0.21	1.0	J	µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
2-Hexanone	ND	1.5	10		µg/L	1	4/2/2019 10:10:22 PM	R58857
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/2/2019 10:10:22 PM	R58857
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/27/2019 3:00:00 PM
Lab ID: 1903D57-010 **Matrix:** AQUEOUS **Received Date:** 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/2/2019 10:10:22 PM	R58857
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/2/2019 10:10:22 PM	R58857
Surr: 1,2-Dichloroethane-d4	83.0	0	70-130		%Rec	1	4/2/2019 10:10:22 PM	R58857
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	4/2/2019 10:10:22 PM	R58857
Surr: Dibromofluoromethane	85.2	0	70-130		%Rec	1	4/2/2019 10:10:22 PM	R58857
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	4/2/2019 10:10:22 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/2/2019 10:10:22 PM	G58857
Surr: BFB	101	0	70-130		%Rec	1	4/2/2019 10:10:22 PM	G58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 3:42:00 PM
Lab ID: 1903D57-011
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	8.1	0.35	1.0		mg/L	1	4/3/2019 9:35:17 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 9:35:17 PM	44015
Surr: DNOP	103	0	70-130		%Rec	1	4/3/2019 9:35:17 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	3/28/2019 9:06:55 PM	R58740
Chloride	390	10	10		mg/L	20	3/28/2019 9:19:47 PM	R58740
Bromide	0.68	0.068	0.50		mg/L	5	3/28/2019 9:06:55 PM	R58740
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5	H	mg/L	5	3/28/2019 9:06:55 PM	R58740
Sulfate	0.75	0.32	2.5	J	mg/L	5	3/28/2019 9:06:55 PM	R58740
Nitrate+Nitrite as N	ND	0.49	1.0		mg/L	5	4/16/2019 10:41:49 PM	R59169
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.037	0.0025	0.020		mg/L	1	4/12/2019 8:44:13 PM	A59128
Barium	5.8	0.0065	0.020	*	mg/L	10	4/5/2019 7:48:10 PM	B58959
Beryllium	ND	0.00028	0.0020		mg/L	1	4/12/2019 8:44:13 PM	A59128
Boron	0.20	0.0045	0.040		mg/L	1	4/12/2019 8:44:13 PM	A59128
Cadmium	ND	0.00055	0.0020		mg/L	1	4/12/2019 8:44:13 PM	A59128
Calcium	280	0.31	5.0		mg/L	5	4/5/2019 7:45:57 PM	B58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/12/2019 8:44:13 PM	A59128
Cobalt	ND	0.0031	0.0060		mg/L	1	4/12/2019 8:44:13 PM	A59128
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:34:32 PM	B59060
Iron	24	0.44	1.0	*	mg/L	50	4/5/2019 7:50:22 PM	B58959
Magnesium	53	0.050	1.0		mg/L	1	4/12/2019 8:44:13 PM	A59128
Manganese	5.1	0.0029	0.020	*	mg/L	10	4/5/2019 7:48:10 PM	B58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/12/2019 8:44:13 PM	A59128
Nickel	0.0052	0.0040	0.010	J	mg/L	1	4/12/2019 8:44:13 PM	A59128
Potassium	0.24	0.16	1.0	J	mg/L	1	4/12/2019 8:44:13 PM	A59128
Silver	0.0014	0.00094	0.0050	J	mg/L	1	4/10/2019 6:34:32 PM	B59060
Sodium	180	2.1	5.0		mg/L	5	4/5/2019 7:45:57 PM	B58959
Zinc	0.022	0.0023	0.010		mg/L	1	4/12/2019 8:44:13 PM	A59128
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	6.6	0.046	0.20	*	mg/L	10	4/3/2019 5:52:35 PM	44011
Barium	5.8	0.0049	0.020	*	mg/L	10	4/3/2019 5:52:35 PM	44011
Beryllium	0.00084	0.00022	0.0020	J	mg/L	1	4/1/2019 8:43:19 PM	44011
Boron	0.20	0.0018	0.040		mg/L	1	4/1/2019 8:43:19 PM	44011
Cadmium	ND	0.00074	0.0020		mg/L	1	4/1/2019 8:43:19 PM	44011
Calcium	250	0.14	5.0		mg/L	5	4/1/2019 8:45:21 PM	44011
Chromium	ND	0.0012	0.0060		mg/L	1	4/1/2019 8:43:19 PM	44011
Copper	ND	0.0041	0.0060		mg/L	1	4/1/2019 8:43:19 PM	44011

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 3:42:00 PM
Lab ID: 1903D57-011
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Iron	25	0.30	1.0	*	mg/L	50	4/3/2019 5:54:42 PM	44011
Manganese	4.7	0.00030	0.010	*	mg/L	5	4/1/2019 8:45:21 PM	44011
Molybdenum	ND	0.0021	0.0080		mg/L	1	4/1/2019 8:43:19 PM	44011
Nickel	0.0088	0.0015	0.010	J	mg/L	1	4/1/2019 8:43:19 PM	44011
Silver	ND	0.0014	0.0050		mg/L	1	4/1/2019 8:43:19 PM	44011
Zinc	0.0092	0.0058	0.010	J	mg/L	1	4/1/2019 8:43:19 PM	44011
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:29:13 PM	B59066
Arsenic	0.0034	0.00010	0.0010		mg/L	1	4/10/2019 8:29:13 PM	B59066
Lead	0.00027	0.000055	0.00050	J	mg/L	1	4/10/2019 8:29:13 PM	B59066
Selenium	0.00031	0.00017	0.0010	J	mg/L	1	4/10/2019 8:29:13 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:29:13 PM	B59066
Uranium	0.00057	0.000075	0.00050		mg/L	1	4/10/2019 8:29:13 PM	B59066
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/9/2019 11:34:28 AM	44011
Arsenic	0.0039	0.00031	0.0010		mg/L	1	4/9/2019 11:34:28 AM	44011
Lead	0.0067	0.000026	0.00050		mg/L	1	4/9/2019 11:34:28 AM	44011
Selenium	0.00049	0.00048	0.0010	J	mg/L	1	4/9/2019 11:34:28 AM	44011
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 11:34:28 AM	44011
Uranium	0.00075	0.000085	0.00050		mg/L	1	4/9/2019 11:34:28 AM	44011
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	4/9/2019 2:24:53 PM	44193
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Acenaphthylene	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Aniline	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Anthracene	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Azobenzene	ND	34	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Benz(a)anthracene	ND	26	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Benzo(a)pyrene	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Benzo(b)fluoranthene	ND	36	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Benzo(k)fluoranthene	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Benzoic acid	73	32	100	J	µg/L	1	4/16/2019 12:27:45 AM	44004
Benzyl alcohol	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 3:42:00 PM
Lab ID: 1903D57-011
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	4/16/2019 12:27:45 AM	44004
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Butyl benzyl phthalate	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Carbazole	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	4/16/2019 12:27:45 AM	44004
4-Chloroaniline	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2-Chloronaphthalene	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2-Chlorophenol	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Chrysene	ND	34	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Di-n-butyl phthalate	ND	34	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Di-n-octyl phthalate	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Dibenzofuran	ND	34	50		µg/L	1	4/16/2019 12:27:45 AM	44004
1,2-Dichlorobenzene	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
1,3-Dichlorobenzene	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
1,4-Dichlorobenzene	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Diethyl phthalate	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Dimethyl phthalate	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2,4-Dichlorophenol	ND	29	100		µg/L	1	4/16/2019 12:27:45 AM	44004
2,4-Dimethylphenol	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	4/16/2019 12:27:45 AM	44004
2,4-Dinitrophenol	ND	19	100		µg/L	1	4/16/2019 12:27:45 AM	44004
2,4-Dinitrotoluene	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2,6-Dinitrotoluene	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Fluoranthene	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Fluorene	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Hexachlorobenzene	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Hexachlorobutadiene	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Hexachloroethane	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Isophorone	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
1-Methylnaphthalene	72	35	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2-Methylnaphthalene	80	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2-Methylphenol	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
3+4-Methylphenol	ND	27	50		µg/L	1	4/16/2019 12:27:45 AM	44004

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 3:42:00 PM
Lab ID: 1903D57-011
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	4/16/2019 12:27:45 AM	44004
N-Nitrosodimethylamine	ND	34	50		µg/L	1	4/16/2019 12:27:45 AM	44004
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Naphthalene	96	25	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2-Nitroaniline	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
3-Nitroaniline	ND	34	50		µg/L	1	4/16/2019 12:27:45 AM	44004
4-Nitroaniline	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Nitrobenzene	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2-Nitrophenol	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
4-Nitrophenol	ND	28	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Pentachlorophenol	ND	26	100		µg/L	1	4/16/2019 12:27:45 AM	44004
Phenanthrene	ND	30	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Phenol	38	30	50	J	µg/L	1	4/16/2019 12:27:45 AM	44004
Pyrene	ND	33	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Pyridine	ND	27	50		µg/L	1	4/16/2019 12:27:45 AM	44004
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	4/16/2019 12:27:45 AM	44004
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	4/16/2019 12:27:45 AM	44004
Surr: 2-Fluorophenol	46.1	0	15-101		%Rec	1	4/16/2019 12:27:45 AM	44004
Surr: Phenol-d5	34.4	0	15-84.6		%Rec	1	4/16/2019 12:27:45 AM	44004
Surr: 2,4,6-Tribromophenol	61.6	0	27.8-112		%Rec	1	4/16/2019 12:27:45 AM	44004
Surr: Nitrobenzene-d5	58.7	0	33-113		%Rec	1	4/16/2019 12:27:45 AM	44004
Surr: 2-Fluorobiphenyl	45.9	0	26.6-107		%Rec	1	4/16/2019 12:27:45 AM	44004
Surr: 4-Terphenyl-d14	55.8	0	18.7-148		%Rec	1	4/16/2019 12:27:45 AM	44004
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3500	33	200		µg/L	200	4/2/2019 10:38:53 PM	R58857
Toluene	140	7.0	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Ethylbenzene	600	2.6	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Methyl tert-butyl ether (MTBE)	440	9.1	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2,4-Trimethylbenzene	590	4.3	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,3,5-Trimethylbenzene	180	3.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Naphthalene	210	5.5	40		µg/L	20	4/2/2019 11:07:17 PM	R58857
1-Methylnaphthalene	120	6.3	80		µg/L	20	4/2/2019 11:07:17 PM	R58857
2-Methylnaphthalene	140	6.9	80		µg/L	20	4/2/2019 11:07:17 PM	R58857
Acetone	ND	24	200		µg/L	20	4/2/2019 11:07:17 PM	R58857
Bromobenzene	ND	4.9	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Bromodichloromethane	ND	2.7	20		µg/L	20	4/2/2019 11:07:17 PM	R58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 3:42:00 PM
Lab ID: 1903D57-011
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromoform	ND	5.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Bromomethane	ND	5.5	60		µg/L	20	4/2/2019 11:07:17 PM	R58857
2-Butanone	ND	42	200		µg/L	20	4/2/2019 11:07:17 PM	R58857
Carbon disulfide	ND	9.1	200		µg/L	20	4/2/2019 11:07:17 PM	R58857
Carbon Tetrachloride	ND	2.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Chlorobenzene	ND	3.9	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Chloroethane	ND	3.6	40		µg/L	20	4/2/2019 11:07:17 PM	R58857
Chloroform	ND	2.4	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Chloromethane	ND	6.4	60		µg/L	20	4/2/2019 11:07:17 PM	R58857
2-Chlorotoluene	ND	4.9	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
4-Chlorotoluene	ND	4.7	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
cis-1,2-DCE	ND	3.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	4/2/2019 11:07:17 PM	R58857
Dibromochloromethane	ND	4.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Dibromomethane	ND	4.2	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,1-Dichloroethane	ND	2.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,1-Dichloroethene	ND	4.1	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2-Dichloropropane	ND	4.2	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,3-Dichloropropane	ND	4.0	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
2,2-Dichloropropane	ND	4.7	40		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,1-Dichloropropene	ND	3.3	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Hexachlorobutadiene	ND	6.2	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
2-Hexanone	ND	31	200		µg/L	20	4/2/2019 11:07:17 PM	R58857
Isopropylbenzene	33	3.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
4-Isopropyltoluene	9.0	4.3	20	J	µg/L	20	4/2/2019 11:07:17 PM	R58857
4-Methyl-2-pentanone	ND	14	200		µg/L	20	4/2/2019 11:07:17 PM	R58857
Methylene Chloride	ND	3.1	60		µg/L	20	4/2/2019 11:07:17 PM	R58857
n-Butylbenzene	ND	4.6	60		µg/L	20	4/2/2019 11:07:17 PM	R58857
n-Propylbenzene	60	4.3	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
sec-Butylbenzene	8.8	5.0	20	J	µg/L	20	4/2/2019 11:07:17 PM	R58857
Styrene	ND	3.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
tert-Butylbenzene	ND	4.1	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	4/2/2019 11:07:17 PM	R58857

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 1st QTR GW SAMPLING
Collection Date: 3/26/2019 3:42:00 PM
Lab ID: 1903D57-011
Matrix: AQUEOUS
Received Date: 3/27/2019 5:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
trans-1,2-DCE	ND	3.6	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Trichlorofluoromethane	ND	3.8	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	4/2/2019 11:07:17 PM	R58857
Vinyl chloride	ND	3.6	20		µg/L	20	4/2/2019 11:07:17 PM	R58857
Xylenes, Total	3500	9.1	30		µg/L	20	4/2/2019 11:07:17 PM	R58857
Surr: 1,2-Dichloroethane-d4	85.7	0	70-130		%Rec	20	4/2/2019 11:07:17 PM	R58857
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	20	4/2/2019 11:07:17 PM	R58857
Surr: Dibromofluoromethane	84.6	0	70-130		%Rec	20	4/2/2019 11:07:17 PM	R58857
Surr: Toluene-d8	97.9	0	70-130		%Rec	20	4/2/2019 11:07:17 PM	R58857
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	27	0.61	1.0		mg/L	20	4/2/2019 11:07:17 PM	G58857
Surr: BFB	102	0	70-130		%Rec	20	4/2/2019 11:07:17 PM	G58857

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B58959**	RunNo: **58959**
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1983214** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B58959**	RunNo: **58959**
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1983215** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0098	0.020	0.01000	0	98.2	50	150			J
Barium	0.0018	0.0020	0.002000	0	91.5	50	150			J
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Iron	0.021	0.020	0.02000	0	105	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Sodium	0.53	1.0	0.5000	0	106	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B58959**	RunNo: **58959**
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1983216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	85	115			
Barium	0.48	0.0020	0.5000	0	95.6	85	115			
Calcium	49	1.0	50.00	0	99.0	85	115			
Iron	0.48	0.020	0.5000	0	95.9	85	115			
Manganese	0.48	0.0020	0.5000	0	95.9	85	115			
Sodium	49	1.0	50.00	0	98.0	85	115			

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987937** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B59060** RunNo: **59060**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987937** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B59060** RunNo: **59060**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	122	50	150			J
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Beryllium	0.0021	0.0020	0.002000	0	107	50	150			
Boron	0.040	0.040	0.04000	0	99.2	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	111	50	150			
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.6	50	150			J
Cobalt	0.0048	0.0060	0.006000	0	80.3	50	150			J
Copper	0.0057	0.0060	0.006000	0	95.4	50	150			J
Iron	0.021	0.020	0.02000	0	105	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	107	50	150			
Molybdenum	0.0095	0.0080	0.008000	0	119	50	150			
Nickel	0.0042	0.010	0.005000	0	84.9	50	150			J
Potassium	0.43	1.0	0.5000	0	86.0	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Zinc	0.0054	0.010	0.005000	0	108	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**

24-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	96.0	85	115			
Beryllium	0.49	0.0020	0.5000	0	99.0	85	115			
Boron	0.48	0.040	0.5000	0	95.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.9	85	115			
Calcium	50	1.0	50.00	0	99.1	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.9	85	115			
Molybdenum	0.50	0.0080	0.5000	0	99.0	85	115			
Nickel	0.49	0.010	0.5000	0	97.9	85	115			
Potassium	50	1.0	50.00	0	99.4	85	115			
Silver	0.098	0.0050	0.1000	0	97.5	85	115			
Zinc	0.49	0.010	0.5000	0	97.3	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59128**	RunNo: **59128**
Prep Date:	Analysis Date: **4/12/2019**	SeqNo: **1990280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**

24-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59128**	RunNo: **59128**
Prep Date:	Analysis Date: **4/12/2019**	SeqNo: **1990281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0098	0.020	0.01000	0	97.9	50	150			J
Barium	0.0018	0.0020	0.002000	0	87.9	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.039	0.040	0.04000	0	98.6	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	97.2	50	150			J
Calcium	0.54	1.0	0.5000	0	107	50	150			J
Chromium	0.0054	0.0060	0.006000	0	89.8	50	150			J
Cobalt	0.0068	0.0060	0.006000	0	113	50	150			
Iron	0.020	0.020	0.02000	0	98.2	50	150			J
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0079	0.0080	0.008000	0	98.6	50	150			J
Nickel	0.0058	0.010	0.005000	0	117	50	150			J
Potassium	0.46	1.0	0.5000	0	91.8	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59128**	RunNo: **59128**
Prep Date:	Analysis Date: **4/12/2019**	SeqNo: **1990282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	100	85	115			
Barium	0.47	0.0020	0.5000	0	93.5	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.6	85	115			
Boron	0.49	0.040	0.5000	0	97.3	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.1	85	115			
Calcium	51	1.0	50.00	0	103	85	115			
Chromium	0.48	0.0060	0.5000	0	95.1	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.0	85	115			
Iron	0.48	0.020	0.5000	0	96.3	85	115			
Magnesium	48	1.0	50.00	0	96.9	85	115			
Manganese	0.48	0.0020	0.5000	0	95.9	85	115			
Molybdenum	0.47	0.0080	0.5000	0	93.9	85	115			
Nickel	0.48	0.010	0.5000	0	95.8	85	115			
Potassium	48	1.0	50.00	0	95.4	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59128**	RunNo: **59128**
Prep Date:	Analysis Date: **4/12/2019**	SeqNo: **1990296** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59128**	RunNo: **59128**
Prep Date:	Analysis Date: **4/12/2019**	SeqNo: **1990296** Units: **mg/L**

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

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59128**	RunNo: **59128**
Prep Date:	Analysis Date: **4/12/2019**	SeqNo: **1990297** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0057	0.010	0.005000	0	113	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59128**	RunNo: **59128**
Prep Date:	Analysis Date: **4/12/2019**	SeqNo: **1990298** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0	98.4	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-44011** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **44011** RunNo: **58806**
Prep Date: **4/1/2019** Analysis Date: **4/1/2019** SeqNo: **1976405** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	0.00052	0.0020								J
Beryllium	0.00027	0.0020								J
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-44011** SampType: **LCSLL** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **44011** RunNo: **58806**
Prep Date: **4/1/2019** Analysis Date: **4/1/2019** SeqNo: **1976406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.015	0.020	0.01000	0	148	50	150			J
Barium	0.0022	0.0020	0.002000	0	111	50	150			
Beryllium	0.0022	0.0020	0.002000	0	110	50	150			
Boron	0.039	0.040	0.04000	0	98.4	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	88.7	50	150			J
Calcium	0.49	1.0	0.5000	0	97.9	50	150			J
Chromium	0.0057	0.0060	0.006000	0	94.7	50	150			J
Cobalt	0.0051	0.0060	0.006000	0	84.7	50	150			J
Copper	0.0043	0.0060	0.006000	0	71.6	50	150			J
Iron	0.018	0.020	0.02000	0	89.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	97.9	50	150			J
Molybdenum	0.0069	0.0080	0.008000	0	85.8	50	150			J
Nickel	0.0061	0.010	0.005000	0	123	50	150			J
Silver	0.0054	0.0050	0.005000	0	108	50	150			
Zinc	0.0058	0.010	0.005000	0	116	50	150			J

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **LCS-44011** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **44011** RunNo: **58806**
Prep Date: **4/1/2019** Analysis Date: **4/1/2019** SeqNo: **1976407** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	85	115			
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Beryllium	0.48	0.0020	0.5000	0	96.9	85	115			
Boron	0.49	0.040	0.5000	0	98.9	85	115			
Cadmium	0.46	0.0020	0.5000	0	92.9	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.45	0.0060	0.5000	0	90.5	85	115			
Cobalt	0.44	0.0060	0.5000	0	88.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.5	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Manganese	0.46	0.0020	0.5000	0	92.7	85	115			
Molybdenum	0.46	0.0080	0.5000	0	92.4	85	115			
Nickel	0.48	0.010	0.5000	0	95.3	85	115			
Silver	0.10	0.0050	0.1000	0	105	85	115			
Zinc	0.45	0.010	0.5000	0	90.1	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59066**	RunNo: **59066**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988012** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59066**	RunNo: **59066**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988014** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	91.1	85	115			
Arsenic	0.023	0.0010	0.02500	0	93.2	85	115			
Lead	0.012	0.00050	0.01250	0	93.8	85	115			
Selenium	0.024	0.0010	0.02500	0	94.3	85	115			
Thallium	0.012	0.00050	0.01250	0	92.8	85	115			
Uranium	0.012	0.00050	0.01250	0	93.9	85	115			

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59066**	RunNo: **59066**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988019** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00064	0.0010	0.001000	0	64.0	50	150			J
Arsenic	0.00090	0.0010	0.001000	0	89.8	50	150			J
Lead	0.00046	0.00050	0.0005000	0	92.7	50	150			J
Selenium	0.00093	0.0010	0.001000	0	93.2	50	150			J
Thallium	0.00041	0.00050	0.0005000	0	81.3	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	90.8	50	150			J

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59066**	RunNo: **59066**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988069** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988069** Units: **mg/L**

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

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988070** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00057	0.0010	0.001000	0	57.0	50	150			J
Arsenic	0.00085	0.0010	0.001000	0	84.9	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.4	50	150			J
Selenium	0.0011	0.0010	0.001000	0	115	50	150			
Thallium	0.00042	0.00050	0.0005000	0	83.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.5	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988071** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	90.9	85	115			
Arsenic	0.023	0.0010	0.02500	0	91.8	85	115			
Lead	0.012	0.00050	0.01250	0	94.6	85	115			
Selenium	0.023	0.0010	0.02500	0	92.6	85	115			
Thallium	0.012	0.00050	0.01250	0	92.6	85	115			
Uranium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID: **1903D57-009EMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-10** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988073** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	103	70	130			
Arsenic	0.029	0.0010	0.02500	0.0005337	113	70	130			
Lead	0.011	0.00050	0.01250	0.0001163	84.4	70	130			
Selenium	0.034	0.0010	0.02500	0.008324	102	70	130			
Thallium	0.010	0.00050	0.01250	0	83.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **1903D57-009EMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-10** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	104	70	130	1.11	20	
Arsenic	0.029	0.0010	0.02500	0.0005337	114	70	130	1.56	20	
Lead	0.011	0.00050	0.01250	0.0001163	84.2	70	130	0.214	20	
Selenium	0.037	0.0010	0.02500	0.008324	115	70	130	9.30	20	
Thallium	0.010	0.00050	0.01250	0	83.2	70	130	0.575	20	

Sample ID: **1903D57-010EMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **DUPLICATE** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988076** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	70	130			
Arsenic	0.028	0.0010	0.02500	0.0004625	111	70	130			
Lead	0.010	0.00050	0.01250	0.0001227	82.3	70	130			
Selenium	0.035	0.0010	0.02500	0.009312	102	70	130			
Thallium	0.010	0.00050	0.01250	0	81.5	70	130			

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A59102** RunNo: **59102**
Prep Date: Analysis Date: **4/11/2019** SeqNo: **1989425** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00058	0.00050	0.0005000	0	116	50	150			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **A59102** RunNo: **59102**
Prep Date: Analysis Date: **4/11/2019** SeqNo: **1989428** Units: **mg/L**

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

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A59102** RunNo: **59102**
Prep Date: Analysis Date: **4/11/2019** SeqNo: **1989430** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **1903D57-009EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-10**	Batch ID: **A59102**	RunNo: **59102**
Prep Date:	Analysis Date: **4/11/2019**	SeqNo: **1989455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.11	0.0025	0.06250	0.04695	104	70	130			

Sample ID: **1903D57-009EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-10**	Batch ID: **A59102**	RunNo: **59102**
Prep Date:	Analysis Date: **4/11/2019**	SeqNo: **1989457** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.11	0.0025	0.06250	0.04695	101	70	130	1.58	20	

Sample ID: **1903D57-010EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **DUPLICATE**	Batch ID: **A59102**	RunNo: **59102**
Prep Date:	Analysis Date: **4/11/2019**	SeqNo: **1989459** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.11	0.0025	0.06250	0.04633	102	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-44011** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **44011** RunNo: **59028**
Prep Date: **4/1/2019** Analysis Date: **4/9/2019** SeqNo: **1986765** Units: **mg/L**

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

Sample ID: **MSLLLCS-44011** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **44011** RunNo: **59028**
Prep Date: **4/1/2019** Analysis Date: **4/9/2019** SeqNo: **1986767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00094	0.0010	0.001000	0	93.8	50	150			J
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.1	50	150			J
Selenium	0.00059	0.0010	0.001000	0	59.0	50	150			J
Thallium	0.00045	0.00050	0.0005000	0	89.8	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	91.4	50	150			J

Sample ID: **MSLCS-44011** SampType: **LCS** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW** Batch ID: **44011** RunNo: **59028**
Prep Date: **4/1/2019** Analysis Date: **4/9/2019** SeqNo: **1986769** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	85	115			
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Lead	0.012	0.00050	0.01250	0	98.6	85	115			
Selenium	0.025	0.0010	0.02500	0	99.1	85	115			
Thallium	0.012	0.00050	0.01250	0	98.0	85	115			
Uranium	0.011	0.00050	0.01250	0	91.1	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-44193**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44193**	RunNo: **59010**
Prep Date: **4/8/2019**	Analysis Date: **4/9/2019**	SeqNo: **1985442** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000095	0.00020								J

Sample ID: **LCS-44193**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44193**	RunNo: **59010**
Prep Date: **4/8/2019**	Analysis Date: **4/9/2019**	SeqNo: **1985444** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.8	80	120			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R58740** RunNo: **58740**
Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973548** Units: **mg/L**

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

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R58740** RunNo: **58740**
Prep Date: Analysis Date: **3/28/2019** SeqNo: **1973549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.9	0.50	5.000	0	97.5	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	94.9	90	110			
Bromide	2.5	0.10	2.500	0	98.6	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.7	90	110			
Sulfate	9.9	0.50	10.00	0	98.9	90	110			

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R58998** RunNo: **58998**
Prep Date: Analysis Date: **4/8/2019** SeqNo: **1985185** Units: **mg/L**

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

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R58998** RunNo: **58998**
Prep Date: Analysis Date: **4/8/2019** SeqNo: **1985187** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.9	90	110			

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59169** RunNo: **59169**
Prep Date: Analysis Date: **4/16/2019** SeqNo: **1992946** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R59169**	RunNo: **59169**							
Prep Date:	Analysis Date: **4/16/2019**	SeqNo: **1992946**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R59169**	RunNo: **59169**							
Prep Date:	Analysis Date: **4/16/2019**	SeqNo: **1992947**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **MB-43996**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**							
Client ID: **PBW**	Batch ID: **43996**	RunNo: **58797**							
Prep Date: **4/1/2019**	Analysis Date: **4/1/2019**	SeqNo: **1975976**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-43996**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**							
Client ID: **LCSW**	Batch ID: **43996**	RunNo: **58797**							
Prep Date: **4/1/2019**	Analysis Date: **4/1/2019**	SeqNo: **1975978**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.098	0.010	0.1000	0	97.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**

24-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **LCS-44015**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **44015**	RunNo: **58853**
Prep Date: **4/2/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	0	116	71.8	135			
Surr: DNOP	0.50		0.5000		100	70	130			

Sample ID: **MB-44015**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **44015**	RunNo: **58853**
Prep Date: **4/2/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		103	70	130			

Sample ID: **1903D57-003BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-50**	Batch ID: **44015**	RunNo: **58853**
Prep Date: **4/2/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	115	68.1	137			
Surr: DNOP	0.51		0.5000		103	70	130			

Sample ID: **1903D57-003BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-50**	Batch ID: **44015**	RunNo: **58853**
Prep Date: **4/2/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	111	68.1	137	3.13	20	
Surr: DNOP	0.50		0.5000		99.6	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**

24-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R58857** RunNo: **58857**

Prep Date: Analysis Date: **4/2/2019** SeqNo: **1978359** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.0	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	83.4	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	82.5	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.4	70	130			
Surr: Toluene-d8	9.4		10.00		93.9	70	130			

Sample ID: **1903d57-003a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **OW-50** Batch ID: **R58857** RunNo: **58857**

Prep Date: Analysis Date: **4/2/2019** SeqNo: **1978363** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	79.5	70	130			
Toluene	19	1.0	20.00	0	94.1	70	130			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	77.5	67.6	130			
Trichloroethene (TCE)	15	1.0	20.00	0	75.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	8.5		10.00		84.6	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Sample ID: **1903d57-003a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **OW-50** Batch ID: **R58857** RunNo: **58857**

Prep Date: Analysis Date: **4/3/2019** SeqNo: **1978364** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	15	1.0	20.00	0	76.4	70	130	3.98	20	
Toluene	17	1.0	20.00	0	87.3	70	130	7.41	20	
Chlorobenzene	17	1.0	20.00	0	87.1	70	130	8.06	20	
1,1-Dichloroethene	15	1.0	20.00	0	74.0	67.6	130	4.70	20	
Trichloroethene (TCE)	14	1.0	20.00	0	72.1	70	130	4.90	20	
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130	0	0	
Surr: Dibromofluoromethane	8.3		10.00		83.3	70	130	0	0	
Surr: Toluene-d8	9.3		10.00		93.1	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58857**	RunNo: **58857**
Prep Date:	Analysis Date: **4/2/2019**	SeqNo: **1978375** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58857**	RunNo: **58857**
Prep Date:	Analysis Date: **4/2/2019**	SeqNo: **1978375** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	8.3		10.00		82.7	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **mb-44004**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44004**	RunNo: **59159**
Prep Date: **4/1/2019**	Analysis Date: **4/15/2019**	SeqNo: **1991552** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	10	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **mb-44004**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44004**	RunNo: **59159**
Prep Date: **4/1/2019**	Analysis Date: **4/15/2019**	SeqNo: **1991552** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.6	15	101			
Surr: Phenol-d5	68		200.0		34.0	15	84.6			
Surr: 2,4,6-Tribromophenol	130		200.0		62.9	27.8	112			
Surr: Nitrobenzene-d5	64		100.0		64.1	33	113			
Surr: 2-Fluorobiphenyl	52		100.0		51.6	26.6	107			
Surr: 4-Terphenyl-d14	47		100.0		47.5	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **lcs-44004**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44004**	RunNo: **59159**
Prep Date: **4/1/2019**	Analysis Date: **4/15/2019**	SeqNo: **1991553** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	52	10	100.0	0	52.3	38.1	100			
4-Chloro-3-methylphenol	130	10	200.0	0	65.3	40.7	109			
2-Chlorophenol	110	10	200.0	0	55.0	38.1	99.9			
1,4-Dichlorobenzene	24	10	100.0	0	24.0	38	95.2			S
2,4-Dinitrotoluene	57	10	100.0	0	56.9	55.1	96.7			
N-Nitrosodi-n-propylamine	62	10	100.0	0	61.7	40.6	111			
4-Nitrophenol	72	10	200.0	0	36.1	15	85.9			
Pentachlorophenol	82	20	200.0	0	40.8	36.5	88.7			
Phenol	67	10	200.0	0	33.5	15	86.5			
Pyrene	58	10	100.0	0	57.9	54.1	97.8			
1,2,4-Trichlorobenzene	32	10	100.0	0	32.3	23.6	102			
Surr: 2-Fluorophenol	84		200.0		41.9	15	101			
Surr: Phenol-d5	65		200.0		32.4	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		59.2	27.8	112			
Surr: Nitrobenzene-d5	57		100.0		57.2	33	113			
Surr: 2-Fluorobiphenyl	41		100.0		40.8	26.6	107			
Surr: 4-Terphenyl-d14	46		100.0		46.0	18.7	148			

Sample ID: **mb-44061**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44061**	RunNo: **59191**
Prep Date: **4/3/2019**	Analysis Date: **4/16/2019**	SeqNo: **1992809** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **mb-44061**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44061**	RunNo: **59191**
Prep Date: **4/3/2019**	Analysis Date: **4/16/2019**	SeqNo: **1992809** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **mb-44061** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44061** RunNo: **59191**
Prep Date: **4/3/2019** Analysis Date: **4/16/2019** SeqNo: **1992809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	80		200.0		40.1	15	101			
Surr: Phenol-d5	59		200.0		29.7	15	84.6			
Surr: 2,4,6-Tribromophenol	110		200.0		57.4	27.8	112			
Surr: Nitrobenzene-d5	55		100.0		55.0	33	113			
Surr: 2-Fluorobiphenyl	43		100.0		43.2	26.6	107			
Surr: 4-Terphenyl-d14	56		100.0		56.0	18.7	148			

Sample ID: **lcs-44061** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **44061** RunNo: **59191**
Prep Date: **4/3/2019** Analysis Date: **4/16/2019** SeqNo: **1992810** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	54	10	100.0	0	53.6	38.1	100			
4-Chloro-3-methylphenol	130	10	200.0	0	65.8	40.7	109			
2-Chlorophenol	100	10	200.0	0	51.8	38.1	99.9			
1,4-Dichlorobenzene	28	10	100.0	0	27.6	38	95.2			S
2,4-Dinitrotoluene	52	10	100.0	0	52.2	55.1	96.7			S
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.2	40.6	111			
4-Nitrophenol	63	10	200.0	0	31.4	15	85.9			
Pentachlorophenol	100	20	200.0	0	49.9	36.5	88.7			
Phenol	60	10	200.0	0	29.8	15	86.5			
Pyrene	67	10	100.0	0	67.2	54.1	97.8			
1,2,4-Trichlorobenzene	34	10	100.0	0	33.7	23.6	102			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**
24-Apr-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW SAMPLING

Sample ID: **lcs-44061** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **44061** RunNo: **59191**
Prep Date: **4/3/2019** Analysis Date: **4/16/2019** SeqNo: **1992810** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	74		200.0		37.1	15	101			
Surr: Phenol-d5	59		200.0		29.4	15	84.6			
Surr: 2,4,6-Tribromophenol	140		200.0		67.7	27.8	112			
Surr: Nitrobenzene-d5	51		100.0		50.8	33	113			
Surr: 2-Fluorobiphenyl	44		100.0		43.5	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		63.4	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903D57**

24-Apr-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW SAMPLING

Sample ID: **1903d57-004a ms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-52**	Batch ID: **G58857**	RunNo: **58857**
Prep Date:	Analysis Date: **4/3/2019**	SeqNo: **1978424** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	99.5	70	130			
Surr: BFB	10		10.00		102	70	130			

Sample ID: **1903d57-004a msd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-52**	Batch ID: **G58857**	RunNo: **58857**
Prep Date:	Analysis Date: **4/3/2019**	SeqNo: **1978425** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.9	70	130	4.73	20	
Surr: BFB	10		10.00		102	70	130	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G58857**	RunNo: **58857**
Prep Date:	Analysis Date: **4/2/2019**	SeqNo: **1978434** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	90.0	70	130			
Surr: BFB	9.9		10.00		98.8	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G58857**	RunNo: **58857**
Prep Date:	Analysis Date: **4/2/2019**	SeqNo: **1978435** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.8		10.00		98.4	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1903D57** RcptNo: **1**

Received By: **Anne Thorne** **3/27/2019 5:12:00 PM** Anne Thorne

Completed By: **Anne Thorne** **3/28/2019 9:35:56 AM** Anne Thorne

Reviewed By: DO 3/28/19

LB: YG 3/28/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐

Samples were collected the same day and chilled.

5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☑ MJ 04/24
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☐ No ☑
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 27 (<2 or >12 unless noted)
Adjusted? ND
Checked by: YG 3/28/19

Special Handling (if applicable)

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

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 3/28/19 two 1L amber bottles received without labels, moved 8270 to 8015DRO fraction for analysis.-ENM 3/28/19 Samples w/o 1L bottles will be analyzed at a dilution from the BKO fraction. X Left a message for Cheryl. of 4/1/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes			
2	8.6	Good	Yes			

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Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1903D57** RcptNo: **1**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
3	6.4	Good	Yes			

Chain-of-Custody Record

Client:	MARATHON - Western Refining
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road, Gallup, NM 87301
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard X Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other_____
☐ EDD (Type)	_____

Turn-Around Time:	X Standard Rush_____
Project Name:	2019 1ST QTR GW SAMPLING
Project #:	OW & BW & MKTF 13
Project Manager:	BRIAN MOORE
Sampler:	CAJohnson1@marathonpetroleum.com
On Ice:	☑ Yes ☐ No
Sample Temperature:	5.4, 8.6, 6.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1903057	Analysis Request: 8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Total Lab Work Order 5/29/19	Air Bubbles (Y or N)
3/27/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	001	X									
3/27/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	002	X									
3/27/2019	830	AQUEOUS	OW-50	MISC	MISC	003	X	X	X	X	X	X	X			
3/27/2019	914	AQUEOUS	OW-52	MISC	MISC	004	X	X	X	X	X	X	X		X	
3/27/2019	1116	AQUEOUS	BW-5C	MISC	MISC	005	X	X	X	X	X	X				
3/27/2019	1026	AQUEOUS	BW-5B	MISC	MISC	006	X	X	X	X	X	X				
3/27/2019	1320	AQUEOUS	BW-4B	MISC	MISC	007	X	X	X	X	X	X				
3/27/2019	1251	AQUEOUS	OW-01	MISC	MISC	008	X	X	X	X	X	X	X			
3/27/2019	1451	AQUEOUS	OW-10	MISC	MISC	009	X	X	X	X	X	X	X			
3/27/2019	1500	AQUEOUS	DUPLICATE	MISC	MISC	010	X	X	X	X	X	X	X			
3/26/2019	1542	AQUEOUS	MKTF-13	MISC	MISC	011	X	X	X	X	X	X				

Date:	Time:	Relinquished by:	Received by:	Date Time	Remarks:
3/27/19	1515			3/27/19 1515	
3/27/19	1712			3/27/19 1712	

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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June 11, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 1st QTR GW Sampling OrderNo.: 1904008

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 11 sample(s) on 3/28/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 24, 2019.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:00:00 AM
Lab ID: 1904008-002
Matrix: TRIP BLANK
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Toluene	ND	0.35	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Naphthalene	ND	0.28	2.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Acetone	3.2	1.2	10	J	µg/L	1	4/4/2019 4:45:00 PM	R58893
Bromobenzene	ND	0.24	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Bromoform	ND	0.29	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Bromomethane	ND	0.27	3.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
2-Butanone	ND	2.1	10		µg/L	1	4/4/2019 4:45:00 PM	R58893
Carbon disulfide	ND	0.45	10		µg/L	1	4/4/2019 4:45:00 PM	R58893
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Chloroethane	ND	0.18	2.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Chloroform	ND	0.12	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Chloromethane	ND	0.32	3.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Dibromomethane	ND	0.21	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/4/2019 4:45:00 PM	R58893

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:00:00 AM
Lab ID: 1904008-002
Matrix: TRIP BLANK
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
2-Hexanone	ND	1.5	10		µg/L	1	4/4/2019 4:45:00 PM	R58893
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/4/2019 4:45:00 PM	R58893
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Styrene	ND	0.19	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/4/2019 4:45:00 PM	R58893
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/4/2019 4:45:00 PM	R58893
Surr: 1,2-Dichloroethane-d4	84.8	0	70-130		%Rec	1	4/4/2019 4:45:00 PM	R58893
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	4/4/2019 4:45:00 PM	R58893
Surr: Dibromofluoromethane	82.5	0	70-130		%Rec	1	4/4/2019 4:45:00 PM	R58893
Surr: Toluene-d8	93.6	0	70-130		%Rec	1	4/4/2019 4:45:00 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/4/2019 4:45:00 PM	GA588
Surr: BFB	99.7	0	70-130		%Rec	1	4/4/2019 4:45:00 PM	GA588

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:50:00 AM
Lab ID: 1904008-003
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	11	0.35	1.0		mg/L	1	4/3/2019 10:19:21 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 10:19:21 PM	44015
Surr: DNOP	107	0	70-130		%Rec	1	4/3/2019 10:19:21 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.3	0.25	0.50		mg/L	5	4/5/2019 3:24:31 PM	R58947
Chloride	1500	50	50		mg/L	100	4/10/2019 12:28:32 AM	R59031
Bromide	3.9	0.068	0.50		mg/L	5	4/5/2019 3:24:31 PM	R58947
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5	H	mg/L	5	4/5/2019 3:24:31 PM	R58947
Sulfate	8.1	0.32	2.5		mg/L	5	4/5/2019 3:24:31 PM	R58947
Nitrate+Nitrite as N	ND	0.49	1.0		mg/L	5	4/5/2019 8:07:35 PM	R58947
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0027	0.0025	0.020	J	mg/L	1	4/10/2019 5:39:09 PM	B59060
Barium	1.1	0.0065	0.020		mg/L	10	4/5/2019 8:06:33 PM	B58959
Beryllium	0.00053	0.00028	0.0020	J	mg/L	1	4/10/2019 5:39:09 PM	B59060
Boron	1.6	0.045	0.40		mg/L	10	4/5/2019 8:06:33 PM	B58959
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:39:09 PM	B59060
Calcium	150	0.62	10		mg/L	10	4/5/2019 8:06:33 PM	B58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:39:09 PM	B59060
Cobalt	0.0054	0.0031	0.0060	J	mg/L	1	4/10/2019 5:39:09 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:39:09 PM	B59060
Iron	4.2	0.087	0.20	*	mg/L	10	4/5/2019 8:06:33 PM	B58959
Magnesium	29	0.050	1.0		mg/L	1	4/10/2019 5:39:09 PM	B59060
Manganese	1.7	0.0029	0.020	*	mg/L	10	4/5/2019 8:06:33 PM	B58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:39:09 PM	B59060
Nickel	0.19	0.0040	0.010	*	mg/L	1	4/10/2019 5:39:09 PM	B59060
Potassium	3.3	0.16	1.0		mg/L	1	4/10/2019 5:39:09 PM	B59060
Silver	0.0024	0.00094	0.0050	J	mg/L	1	4/10/2019 5:39:09 PM	B59060
Sodium	1200	21	50		mg/L	50	4/5/2019 8:08:44 PM	B58959
Zinc	0.045	0.0023	0.010		mg/L	1	4/10/2019 5:39:09 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	2.5	0.023	0.10	*	mg/L	5	4/10/2019 6:38:49 PM	44167
Barium	1.1	0.0032	0.010		mg/L	5	4/10/2019 6:38:49 PM	44167
Beryllium	0.00059	0.00028	0.0020	J	mg/L	1	4/10/2019 6:36:49 PM	44167
Boron	1.6	0.023	0.20		mg/L	5	4/10/2019 6:38:49 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 6:36:49 PM	44167
Chromium	0.0016	0.0015	0.0060	J	mg/L	1	4/10/2019 6:36:49 PM	44167
Cobalt	0.0056	0.0031	0.0060	J	mg/L	1	4/10/2019 6:36:49 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 6:36:49 PM	44167

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

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:50:00 AM
Lab ID: 1904008-003
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Iron	5.6	0.087	0.20	*	mg/L	10	4/10/2019 6:49:44 PM	44167
Manganese	1.6	0.0014	0.010	*	mg/L	5	4/10/2019 6:38:49 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:36:49 PM	44167
Nickel	0.20	0.0040	0.010	*	mg/L	1	4/10/2019 6:36:49 PM	44167
Silver	0.0019	0.0014	0.0050	J	mg/L	1	4/10/2019 6:36:49 PM	44167
Zinc	0.014	0.0058	0.010		mg/L	1	4/10/2019 6:36:49 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	4/10/2019 8:31:50 PM	B59066
Arsenic	0.0067	0.00050	0.0050		mg/L	5	4/10/2019 8:31:50 PM	B59066
Lead	0.00044	0.00027	0.0025	J	mg/L	5	4/10/2019 8:31:50 PM	B59066
Selenium	0.0013	0.00086	0.0050	J	mg/L	5	4/10/2019 8:31:50 PM	B59066
Thallium	ND	0.00024	0.0025		mg/L	5	4/10/2019 8:31:50 PM	B59066
Uranium	0.011	0.00037	0.0025		mg/L	5	4/10/2019 8:31:50 PM	B59066
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	4/9/2019 2:23:31 PM	44167
Arsenic	0.0071	0.0016	0.0050		mg/L	5	4/9/2019 2:23:31 PM	44167
Lead	0.0061	0.00027	0.0025		mg/L	5	4/9/2019 2:23:31 PM	44167
Selenium	ND	0.0024	0.0050		mg/L	5	4/9/2019 2:23:31 PM	44167
Thallium	ND	0.00026	0.0025		mg/L	5	4/9/2019 2:23:31 PM	44167
Uranium	0.012	0.00042	0.0025		mg/L	5	4/9/2019 5:55:37 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	4/11/2019 4:41:09 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Benzoic acid	ND	6.3	20		µg/L	1	4/16/2019 12:10:54 PM	44061
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:50:00 AM
Lab ID: 1904008-003
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 12:10:54 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 12:10:54 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 12:10:54 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 12:10:54 PM	44061
2,4-Dimethylphenol	14	5.9	10		µg/L	1	4/16/2019 12:10:54 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 12:10:54 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 12:10:54 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 12:10:54 PM	44061
1-Methylnaphthalene	11	7.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 12:10:54 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 12:10:54 PM	44061

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:50:00 AM
Lab ID: 1904008-003 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 12:10:54 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 12:10:54 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 12:10:54 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 12:10:54 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 12:10:54 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 12:10:54 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 12:10:54 PM	44061
Surr: 2-Fluorophenol	47.4	0	15-101		%Rec	1	4/16/2019 12:10:54 PM	44061
Surr: Phenol-d5	34.1	0	15-84.6		%Rec	1	4/16/2019 12:10:54 PM	44061
Surr: 2,4,6-Tribromophenol	69.3	0	27.8-112		%Rec	1	4/16/2019 12:10:54 PM	44061
Surr: Nitrobenzene-d5	59.5	0	33-113		%Rec	1	4/16/2019 12:10:54 PM	44061
Surr: 2-Fluorobiphenyl	46.9	0	26.6-107		%Rec	1	4/16/2019 12:10:54 PM	44061
Surr: 4-Terphenyl-d14	53.7	0	18.7-148		%Rec	1	4/16/2019 12:10:54 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	77	0.33	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Toluene	ND	0.70	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Ethylbenzene	10	0.26	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Methyl tert-butyl ether (MTBE)	200	0.91	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2,4-Trimethylbenzene	6.1	0.43	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,3,5-Trimethylbenzene	ND	0.38	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2-Dichloroethane (EDC)	0.66	0.39	2.0	J	µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Naphthalene	8.2	0.55	4.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1-Methylnaphthalene	20	0.63	8.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
2-Methylnaphthalene	3.6	0.69	8.0	J	µg/L	2	4/4/2019 5:13:27 PM	R58893
Acetone	14	2.4	20	J	µg/L	2	4/4/2019 5:13:27 PM	R58893
Bromobenzene	ND	0.49	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Bromodichloromethane	ND	0.27	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:50:00 AM
Lab ID: 1904008-003
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromoform	ND	0.58	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Bromomethane	ND	0.55	6.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
2-Butanone	ND	4.2	20		µg/L	2	4/4/2019 5:13:27 PM	R58893
Carbon disulfide	ND	0.91	20		µg/L	2	4/4/2019 5:13:27 PM	R58893
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Chlorobenzene	ND	0.39	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Chloroethane	ND	0.36	4.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Chloroform	ND	0.24	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Chloromethane	ND	0.64	6.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
cis-1,2-DCE	ND	0.38	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Dibromochloromethane	ND	0.48	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Dibromomethane	ND	0.42	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,1-Dichloroethane	1.1	0.28	2.0	J	µg/L	2	4/4/2019 5:13:27 PM	R58893
1,1-Dichloroethene	ND	0.41	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
2-Hexanone	ND	3.1	20		µg/L	2	4/4/2019 5:13:27 PM	R58893
Isopropylbenzene	0.99	0.38	2.0	J	µg/L	2	4/4/2019 5:13:27 PM	R58893
4-Isopropyltoluene	ND	0.43	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	4/4/2019 5:13:27 PM	R58893
Methylene Chloride	ND	0.31	6.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
n-Butylbenzene	ND	0.46	6.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
n-Propylbenzene	1.3	0.43	2.0	J	µg/L	2	4/4/2019 5:13:27 PM	R58893
sec-Butylbenzene	ND	0.50	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Styrene	ND	0.38	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
tert-Butylbenzene	ND	0.41	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	4/4/2019 5:13:27 PM	R58893

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 7:50:00 AM
Lab ID: 1904008-003 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,1,2-Trichloroethane	ND	0.43	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Trichloroethene (TCE)	ND	0.33	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Vinyl chloride	ND	0.36	2.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Xylenes, Total	4.0	0.91	3.0		µg/L	2	4/4/2019 5:13:27 PM	R58893
Surr: 1,2-Dichloroethane-d4	88.6	0	70-130		%Rec	2	4/4/2019 5:13:27 PM	R58893
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	2	4/4/2019 5:13:27 PM	R58893
Surr: Dibromofluoromethane	84.8	0	70-130		%Rec	2	4/4/2019 5:13:27 PM	R58893
Surr: Toluene-d8	94.8	0	70-130		%Rec	2	4/4/2019 5:13:27 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.68	0.061	0.10		mg/L	2	4/4/2019 5:13:27 PM	GA588
Surr: BFB	104	0	70-130		%Rec	2	4/4/2019 5:13:27 PM	GA588
EPA 335.4: TOTAL CYANIDE SUBBED							Analyst: **PAC**	
Cyanide	0.0818	0.00500	0.00500		mg/L	1	4/10/2019	R59461

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 8:55:00 AM
Lab ID: 1904008-004 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 10:41:23 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 10:41:23 PM	44015
Surr: DNOP	107	0	70-130		%Rec	1	4/3/2019 10:41:23 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.97	0.25	0.50		mg/L	5	4/5/2019 3:50:13 PM	R58947
Chloride	420	25	25		mg/L	50	4/10/2019 12:40:57 AM	R59031
Bromide	2.0	0.068	0.50		mg/L	5	4/5/2019 3:50:13 PM	R58947
Phosphorus, Orthophosphate (As P)	0.51	0.13	2.5	JH	mg/L	5	4/5/2019 3:50:13 PM	R58947
Sulfate	180	0.32	2.5		mg/L	5	4/5/2019 3:50:13 PM	R58947
Nitrate+Nitrite as N	1.2	0.49	1.0		mg/L	5	4/5/2019 8:20:27 PM	R58947
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.030	0.0025	0.020		mg/L	1	4/10/2019 5:41:08 PM	B59060
Barium	0.051	0.00065	0.0020		mg/L	1	4/10/2019 5:41:08 PM	B59060
Beryllium	0.00029	0.00028	0.0020	J	mg/L	1	4/10/2019 5:41:08 PM	B59060
Boron	1.4	0.023	0.20		mg/L	5	4/5/2019 8:13:11 PM	B58959
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:41:08 PM	B59060
Calcium	44	0.062	1.0		mg/L	1	4/10/2019 5:41:08 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:41:08 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:41:08 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:41:08 PM	B59060
Iron	0.022	0.0087	0.020		mg/L	1	4/10/2019 5:41:08 PM	B59060
Magnesium	8.7	0.050	1.0		mg/L	1	4/10/2019 5:41:08 PM	B59060
Manganese	0.0036	0.00029	0.0020		mg/L	1	4/10/2019 5:41:08 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:41:08 PM	B59060
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 5:41:08 PM	B59060
Potassium	1.7	0.16	1.0		mg/L	1	4/10/2019 5:41:08 PM	B59060
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 5:41:08 PM	B59060
Sodium	520	4.2	10		mg/L	10	4/5/2019 8:15:14 PM	B58959
Zinc	0.052	0.0023	0.010		mg/L	1	4/10/2019 5:41:08 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.9	0.023	0.10	*	mg/L	5	4/10/2019 6:53:57 PM	44167
Barium	0.071	0.00065	0.0020		mg/L	1	4/10/2019 6:51:57 PM	44167
Beryllium	0.00039	0.00028	0.0020	J	mg/L	1	4/10/2019 6:51:57 PM	44167
Boron	1.5	0.023	0.20		mg/L	5	4/10/2019 6:53:57 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 6:51:57 PM	44167
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:51:57 PM	44167
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:51:57 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 6:51:57 PM	44167

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 8:55:00 AM
Lab ID: 1904008-004
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Iron	1.4	0.044	0.10	*	mg/L	5	4/10/2019 6:53:57 PM	44167
Manganese	0.094	0.00029	0.0020	*	mg/L	1	4/10/2019 6:51:57 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:51:57 PM	44167
Nickel	ND	0.0040	0.010		mg/L	1	4/10/2019 6:51:57 PM	44167
Silver	ND	0.0014	0.0050		mg/L	1	4/10/2019 6:51:57 PM	44167
Zinc	0.0059	0.0058	0.010	J	mg/L	1	4/10/2019 6:51:57 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:39:44 PM	B59066
Arsenic	0.0011	0.00010	0.0010		mg/L	1	4/10/2019 8:39:44 PM	B59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 8:39:44 PM	B59066
Selenium	0.00044	0.00017	0.0010	J	mg/L	1	4/10/2019 8:39:44 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:39:44 PM	B59066
Uranium	0.13	0.00075	0.0050	*	mg/L	10	4/16/2019 9:19:28 PM	A59204
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/9/2019 2:25:38 PM	44167
Arsenic	0.0014	0.00031	0.0010		mg/L	1	4/9/2019 2:25:38 PM	44167
Lead	0.0015	0.000055	0.00050		mg/L	1	4/9/2019 2:25:38 PM	44167
Selenium	0.00064	0.00048	0.0010	J	mg/L	1	4/9/2019 2:25:38 PM	44167
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 2:25:38 PM	44167
Uranium	0.14	0.00085	0.0050	*	mg/L	10	4/15/2019 5:51:47 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000086	0.000038	0.00020	J	mg/L	1	4/11/2019 4:43:24 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Benzoic acid	6.7	6.3	20	J	µg/L	1	4/16/2019 12:40:21 PM	44061
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-28
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 8:55:00 AM
Lab ID: 1904008-004
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 12:40:21 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 12:40:21 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 12:40:21 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 12:40:21 PM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 12:40:21 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 12:40:21 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 12:40:21 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 12:40:21 PM	44061
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 12:40:21 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 12:40:21 PM	44061

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 8:55:00 AM
Lab ID: 1904008-004 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 12:40:21 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 12:40:21 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 12:40:21 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 12:40:21 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 12:40:21 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 12:40:21 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 12:40:21 PM	44061
Surr: 2-Fluorophenol	43.5	0	15-101		%Rec	1	4/16/2019 12:40:21 PM	44061
Surr: Phenol-d5	32.2	0	15-84.6		%Rec	1	4/16/2019 12:40:21 PM	44061
Surr: 2,4,6-Tribromophenol	52.4	0	27.8-112		%Rec	1	4/16/2019 12:40:21 PM	44061
Surr: Nitrobenzene-d5	59.0	0	33-113		%Rec	1	4/16/2019 12:40:21 PM	44061
Surr: 2-Fluorobiphenyl	45.0	0	26.6-107		%Rec	1	4/16/2019 12:40:21 PM	44061
Surr: 4-Terphenyl-d14	53.1	0	18.7-148		%Rec	1	4/16/2019 12:40:21 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Toluene	ND	0.35	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Methyl tert-butyl ether (MTBE)	0.82	0.46	1.0	J	µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Naphthalene	ND	0.28	2.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Acetone	3.7	1.2	10	J	µg/L	1	4/4/2019 5:41:54 PM	R58893
Bromobenzene	ND	0.24	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromoform	ND	0.29	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Bromomethane	ND	0.27	3.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
2-Butanone	ND	2.1	10		µg/L	1	4/4/2019 5:41:54 PM	R58893
Carbon disulfide	ND	0.45	10		µg/L	1	4/4/2019 5:41:54 PM	R58893
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Chloroethane	ND	0.18	2.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Chloroform	ND	0.12	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Chloromethane	ND	0.32	3.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Dibromomethane	ND	0.21	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
2-Hexanone	ND	1.5	10		µg/L	1	4/4/2019 5:41:54 PM	R58893
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/4/2019 5:41:54 PM	R58893
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Styrene	ND	0.19	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/4/2019 5:41:54 PM	R58893

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 8:55:00 AM
Lab ID: 1904008-004 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/4/2019 5:41:54 PM	R58893
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/4/2019 5:41:54 PM	R58893
Surr: 1,2-Dichloroethane-d4	84.6	0	70-130		%Rec	1	4/4/2019 5:41:54 PM	R58893
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	4/4/2019 5:41:54 PM	R58893
Surr: Dibromofluoromethane	83.8	0	70-130		%Rec	1	4/4/2019 5:41:54 PM	R58893
Surr: Toluene-d8	94.7	0	70-130		%Rec	1	4/4/2019 5:41:54 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/4/2019 5:41:54 PM	GA588
Surr: BFB	102	0	70-130		%Rec	1	4/4/2019 5:41:54 PM	GA588

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:24:00 AM
Lab ID: 1904008-005 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/3/2019 4:49:57 PM	44035
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/3/2019 11:03:21 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 11:03:21 PM	44015
Surr: DNOP	103	0	70-130		%Rec	1	4/3/2019 11:03:21 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.93	0.25	0.50		mg/L	5	4/5/2019 4:15:57 PM	R58947
Chloride	410	25	25		mg/L	50	4/10/2019 12:53:21 AM	R59031
Bromide	0.82	0.068	0.50		mg/L	5	4/5/2019 4:15:57 PM	R58947
Phosphorus, Orthophosphate (As P)	0.27	0.13	2.5	JH	mg/L	5	4/5/2019 4:15:57 PM	R58947
Sulfate	510	1.3	10		mg/L	20	4/5/2019 4:28:50 PM	R58947
Nitrate+Nitrite as N	ND	0.49	1.0		mg/L	5	4/5/2019 8:33:19 PM	R58947
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.093	0.0025	0.020		mg/L	1	4/10/2019 5:43:11 PM	B59060
Barium	0.026	0.00065	0.0020		mg/L	1	4/10/2019 5:43:11 PM	B59060
Beryllium	0.00033	0.00028	0.0020	J	mg/L	1	4/10/2019 5:43:11 PM	B59060
Boron	0.55	0.0045	0.040		mg/L	1	4/10/2019 5:43:11 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:43:11 PM	B59060
Calcium	65	0.062	1.0		mg/L	1	4/10/2019 5:43:11 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:43:11 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:43:11 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:43:11 PM	B59060
Iron	0.043	0.0087	0.020		mg/L	1	4/10/2019 5:43:11 PM	B59060
Magnesium	12	0.050	1.0		mg/L	1	4/10/2019 5:43:11 PM	B59060
Manganese	0.0065	0.00029	0.0020		mg/L	1	4/10/2019 5:43:11 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:43:11 PM	B59060
Nickel	0.015	0.0040	0.010		mg/L	1	4/10/2019 5:43:11 PM	B59060
Potassium	0.19	0.16	1.0	J	mg/L	1	4/10/2019 5:43:11 PM	B59060
Silver	0.00098	0.00094	0.0050	J	mg/L	1	4/10/2019 5:43:11 PM	B59060
Sodium	670	4.2	10		mg/L	10	4/5/2019 8:21:31 PM	B58959
Zinc	0.024	0.0023	0.010		mg/L	1	4/10/2019 5:43:11 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	20	0.23	1.0	*	mg/L	50	4/15/2019 6:33:11 PM	44167
Barium	0.25	0.00065	0.0020		mg/L	1	4/10/2019 6:58:06 PM	44167
Beryllium	0.0015	0.00028	0.0020	J	mg/L	1	4/10/2019 6:58:06 PM	44167
Boron	0.56	0.0045	0.040		mg/L	1	4/10/2019 6:58:06 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 6:58:06 PM	44167

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:24:00 AM
Lab ID: 1904008-005 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	0.0068	0.0015	0.0060		mg/L	1	4/10/2019 6:58:06 PM	44167
Cobalt	0.0044	0.0031	0.0060	J	mg/L	1	4/10/2019 6:58:06 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 6:58:06 PM	44167
Iron	9.5	0.087	0.20	*	mg/L	10	4/10/2019 7:01:57 PM	44167
Manganese	0.41	0.00029	0.0020	*	mg/L	1	4/10/2019 6:58:06 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:58:06 PM	44167
Nickel	0.024	0.0040	0.010		mg/L	1	4/10/2019 6:58:06 PM	44167
Silver	ND	0.0014	0.0050		mg/L	1	4/10/2019 6:58:06 PM	44167
Zinc	0.025	0.0058	0.010		mg/L	1	4/10/2019 6:58:06 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:42:21 PM	B59066
Arsenic	0.00065	0.00010	0.0010	J	mg/L	1	4/10/2019 8:42:21 PM	B59066
Lead	0.00011	0.000055	0.00050	J	mg/L	1	4/10/2019 8:42:21 PM	B59066
Selenium	0.00040	0.00017	0.0010	J	mg/L	1	4/10/2019 8:42:21 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:42:21 PM	B59066
Uranium	0.034	0.00037	0.0025	*	mg/L	5	4/11/2019 9:04:13 PM	A59102
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	4/9/2019 2:27:46 PM	44167
Arsenic	0.0021	0.0016	0.0050	J	mg/L	5	4/9/2019 2:27:46 PM	44167
Lead	0.0084	0.00027	0.0025		mg/L	5	4/9/2019 2:27:46 PM	44167
Selenium	ND	0.0024	0.0050		mg/L	5	4/9/2019 2:27:46 PM	44167
Thallium	ND	0.00026	0.0025		mg/L	5	4/9/2019 2:27:46 PM	44167
Uranium	0.038	0.00042	0.0025	*	mg/L	5	4/9/2019 6:04:09 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000084	0.000038	0.00020	J	mg/L	1	4/11/2019 4:45:39 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Benzoic acid	7.4	6.3	20	J	µg/L	1	4/16/2019 2:09:02 PM	44061

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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:24:00 AM
Lab ID: 1904008-005
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 2:09:02 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 2:09:02 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 2:09:02 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 2:09:02 PM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 2:09:02 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 2:09:02 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 2:09:02 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 2:09:02 PM	44061
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:24:00 AM
Lab ID: 1904008-005 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 2:09:02 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 2:09:02 PM	44061
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 2:09:02 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 2:09:02 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 2:09:02 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 2:09:02 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 2:09:02 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 2:09:02 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 2:09:02 PM	44061
Surr: 2-Fluorophenol	57.1	0	15-101		%Rec	1	4/16/2019 2:09:02 PM	44061
Surr: Phenol-d5	41.9	0	15-84.6		%Rec	1	4/16/2019 2:09:02 PM	44061
Surr: 2,4,6-Tribromophenol	84.5	0	27.8-112		%Rec	1	4/16/2019 2:09:02 PM	44061
Surr: Nitrobenzene-d5	78.3	0	33-113		%Rec	1	4/16/2019 2:09:02 PM	44061
Surr: 2-Fluorobiphenyl	62.1	0	26.6-107		%Rec	1	4/16/2019 2:09:02 PM	44061
Surr: 4-Terphenyl-d14	85.7	0	18.7-148		%Rec	1	4/16/2019 2:09:02 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Toluene	ND	0.35	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Methyl tert-butyl ether (MTBE)	1.3	0.46	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2-Dichloroethane (EDC)	1.1	0.19	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Naphthalene	ND	0.28	2.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/4/2019 6:10:30 PM	R58893

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:24:00 AM
Lab ID: 1904008-005 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	3.7	1.2	10	J	µg/L	1	4/4/2019 6:10:30 PM	R58893
Bromobenzene	ND	0.24	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Bromoform	ND	0.29	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Bromomethane	ND	0.27	3.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
2-Butanone	ND	2.1	10		µg/L	1	4/4/2019 6:10:30 PM	R58893
Carbon disulfide	ND	0.45	10		µg/L	1	4/4/2019 6:10:30 PM	R58893
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Chloroethane	ND	0.18	2.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Chloroform	ND	0.12	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Chloromethane	ND	0.32	3.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
cis-1,2-DCE	2.0	0.19	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Dibromomethane	ND	0.21	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,1-Dichloroethane	27	0.14	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,1-Dichloroethene	1.7	0.21	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
2-Hexanone	ND	1.5	10		µg/L	1	4/4/2019 6:10:30 PM	R58893
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/4/2019 6:10:30 PM	R58893
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Styrene	ND	0.19	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:24:00 AM
Lab ID: 1904008-005 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,1,2-Trichloroethane	0.25	0.22	1.0	J	µg/L	1	4/4/2019 6:10:30 PM	R58893
Trichloroethene (TCE)	1.6	0.17	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/4/2019 6:10:30 PM	R58893
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/4/2019 6:10:30 PM	R58893
Surr: 1,2-Dichloroethane-d4	87.0	0	70-130		%Rec	1	4/4/2019 6:10:30 PM	R58893
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	4/4/2019 6:10:30 PM	R58893
Surr: Dibromofluoromethane	82.9	0	70-130		%Rec	1	4/4/2019 6:10:30 PM	R58893
Surr: Toluene-d8	92.5	0	70-130		%Rec	1	4/4/2019 6:10:30 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.036	0.031	0.050	J	mg/L	1	4/4/2019 6:10:30 PM	GA5889
Surr: BFB	98.2	0	70-130		%Rec	1	4/4/2019 6:10:30 PM	GA5889

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:56:00 AM
Lab ID: 1904008-006 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/3/2019 5:04:55 PM	44035
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.51	0.35	1.0	J	mg/L	1	4/3/2019 11:25:18 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 11:25:18 PM	44015
Surr: DNOP	104	0	70-130		%Rec	1	4/3/2019 11:25:18 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.54	0.25	0.50		mg/L	5	4/5/2019 4:41:41 PM	R58947
Chloride	190	10	10		mg/L	20	4/5/2019 4:54:33 PM	R58947
Bromide	0.77	0.068	0.50		mg/L	5	4/5/2019 4:41:41 PM	R58947
Phosphorus, Orthophosphate (As P)	0.14	0.13	2.5	JH	mg/L	5	4/5/2019 4:41:41 PM	R58947
Sulfate	540	1.3	10		mg/L	20	4/5/2019 4:54:33 PM	R58947
Nitrate+Nitrite as N	ND	0.49	1.0		mg/L	5	4/5/2019 8:46:11 PM	R58947
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:51:41 PM	B59060
Barium	0.026	0.00065	0.0020		mg/L	1	4/10/2019 5:51:41 PM	B59060
Beryllium	0.00032	0.00028	0.0020	J	mg/L	1	4/10/2019 5:51:41 PM	B59060
Boron	0.53	0.0045	0.040		mg/L	1	4/10/2019 5:51:41 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:51:41 PM	B59060
Calcium	78	0.062	1.0		mg/L	1	4/10/2019 5:51:41 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:51:41 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:51:41 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:51:41 PM	B59060
Iron	0.020	0.0087	0.020		mg/L	1	4/10/2019 5:51:41 PM	B59060
Magnesium	11	0.050	1.0		mg/L	1	4/10/2019 5:51:41 PM	B59060
Manganese	0.59	0.00029	0.0020	*	mg/L	1	4/10/2019 5:51:41 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:51:41 PM	B59060
Nickel	0.0045	0.0040	0.010	J	mg/L	1	4/10/2019 5:51:41 PM	B59060
Potassium	0.30	0.16	1.0	J	mg/L	1	4/10/2019 5:51:41 PM	B59060
Silver	0.0016	0.00094	0.0050	J	mg/L	1	4/10/2019 5:51:41 PM	B59060
Sodium	480	2.1	5.0		mg/L	5	4/5/2019 8:32:50 PM	B58959
Zinc	0.030	0.0023	0.010		mg/L	1	4/10/2019 5:51:41 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.6	0.023	0.10	*	mg/L	5	4/10/2019 7:06:11 PM	44167
Barium	0.051	0.00065	0.0020		mg/L	1	4/10/2019 7:03:58 PM	44167
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 7:03:58 PM	44167
Boron	0.56	0.0045	0.040		mg/L	1	4/10/2019 7:03:58 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 7:03:58 PM	44167

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:56:00 AM
Lab ID: 1904008-006 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 7:03:58 PM	44167
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 7:03:58 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 7:03:58 PM	44167
Iron	0.57	0.0087	0.020	*	mg/L	1	4/10/2019 7:03:58 PM	44167
Manganese	0.60	0.00029	0.0020	*	mg/L	1	4/10/2019 7:03:58 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 7:03:58 PM	44167
Nickel	0.0067	0.0040	0.010	J	mg/L	1	4/10/2019 7:03:58 PM	44167
Silver	ND	0.0014	0.0050		mg/L	1	4/10/2019 7:03:58 PM	44167
Zinc	ND	0.0058	0.010		mg/L	1	4/10/2019 7:03:58 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:44:58 PM	B59066
Arsenic	0.0010	0.00010	0.0010		mg/L	1	4/10/2019 8:44:58 PM	B59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 8:44:58 PM	B59066
Selenium	0.00018	0.00017	0.0010	J	mg/L	1	4/10/2019 8:44:58 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:44:58 PM	B59066
Uranium	0.0076	0.000075	0.00050		mg/L	1	4/10/2019 8:44:58 PM	B59066
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/9/2019 2:29:53 PM	44167
Arsenic	0.0010	0.00031	0.0010		mg/L	1	4/9/2019 2:29:53 PM	44167
Lead	0.00043	0.000055	0.00050	J	mg/L	1	4/9/2019 2:29:53 PM	44167
Selenium	ND	0.00048	0.0010		mg/L	1	4/9/2019 2:29:53 PM	44167
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 2:29:53 PM	44167
Uranium	0.0088	0.000085	0.00050		mg/L	1	4/9/2019 6:06:16 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000085	0.000038	0.00020	J	mg/L	1	4/11/2019 4:47:55 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Benzoic acid	6.8	6.3	20	J	µg/L	1	4/16/2019 2:38:36 PM	44061

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:56:00 AM
Lab ID: 1904008-006
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 2:38:36 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 2:38:36 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 2:38:36 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 2:38:36 PM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 2:38:36 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 2:38:36 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 2:38:36 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 2:38:36 PM	44061
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:56:00 AM
Lab ID: 1904008-006 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 2:38:36 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 2:38:36 PM	44061
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 2:38:36 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 2:38:36 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 2:38:36 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 2:38:36 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 2:38:36 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 2:38:36 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 2:38:36 PM	44061
Surr: 2-Fluorophenol	39.0	0	15-101		%Rec	1	4/16/2019 2:38:36 PM	44061
Surr: Phenol-d5	28.8	0	15-84.6		%Rec	1	4/16/2019 2:38:36 PM	44061
Surr: 2,4,6-Tribromophenol	49.0	0	27.8-112		%Rec	1	4/16/2019 2:38:36 PM	44061
Surr: Nitrobenzene-d5	51.5	0	33-113		%Rec	1	4/16/2019 2:38:36 PM	44061
Surr: 2-Fluorobiphenyl	42.0	0	26.6-107		%Rec	1	4/16/2019 2:38:36 PM	44061
Surr: 4-Terphenyl-d14	51.1	0	18.7-148		%Rec	1	4/16/2019 2:38:36 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Toluene	ND	0.35	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Methyl tert-butyl ether (MTBE)	4.1	0.46	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Naphthalene	ND	0.28	2.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/4/2019 6:39:07 PM	R58893

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:56:00 AM
Lab ID: 1904008-006 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	3.3	1.2	10	J	µg/L	1	4/4/2019 6:39:07 PM	R58893
Bromobenzene	ND	0.24	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Bromoform	ND	0.29	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Bromomethane	ND	0.27	3.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
2-Butanone	ND	2.1	10		µg/L	1	4/4/2019 6:39:07 PM	R58893
Carbon disulfide	ND	0.45	10		µg/L	1	4/4/2019 6:39:07 PM	R58893
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Chloroethane	ND	0.18	2.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Chloroform	ND	0.12	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Chloromethane	ND	0.32	3.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Dibromomethane	ND	0.21	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
2-Hexanone	ND	1.5	10		µg/L	1	4/4/2019 6:39:07 PM	R58893
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/4/2019 6:39:07 PM	R58893
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Styrene	ND	0.19	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 9:56:00 AM
Lab ID: 1904008-006 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/4/2019 6:39:07 PM	R58893
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/4/2019 6:39:07 PM	R58893
Surr: 1,2-Dichloroethane-d4	84.0	0	70-130		%Rec	1	4/4/2019 6:39:07 PM	R58893
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	4/4/2019 6:39:07 PM	R58893
Surr: Dibromofluoromethane	83.4	0	70-130		%Rec	1	4/4/2019 6:39:07 PM	R58893
Surr: Toluene-d8	96.2	0	70-130		%Rec	1	4/4/2019 6:39:07 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/4/2019 6:39:07 PM	GA588
Surr: BFB	102	0	70-130		%Rec	1	4/4/2019 6:39:07 PM	GA588

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 10:15:00 AM
Lab ID: 1904008-007
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/3/2019 5:19:59 PM	44035
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.49	0.35	1.0	J	mg/L	1	4/3/2019 11:47:17 PM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/3/2019 11:47:17 PM	44015
Surr: DNOP	105	0	70-130		%Rec	1	4/3/2019 11:47:17 PM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.53	0.25	0.50		mg/L	5	4/5/2019 5:33:08 PM	R58947
Chloride	190	10	10		mg/L	20	4/5/2019 5:46:00 PM	R58947
Bromide	0.77	0.068	0.50		mg/L	5	4/5/2019 5:33:08 PM	R58947
Phosphorus, Orthophosphate (As P)	0.16	0.13	2.5	JH	mg/L	5	4/5/2019 5:33:08 PM	R58947
Sulfate	530	1.3	10		mg/L	20	4/5/2019 5:46:00 PM	R58947
Nitrate+Nitrite as N	ND	0.49	1.0		mg/L	5	4/5/2019 8:59:02 PM	R58947
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:53:50 PM	B59060
Barium	0.026	0.00065	0.0020		mg/L	1	4/10/2019 5:53:50 PM	B59060
Beryllium	0.00033	0.00028	0.0020	J	mg/L	1	4/10/2019 5:53:50 PM	B59060
Boron	0.54	0.0045	0.040		mg/L	1	4/10/2019 5:53:50 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:53:50 PM	B59060
Calcium	79	0.062	1.0		mg/L	1	4/10/2019 5:53:50 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:53:50 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:53:50 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:53:50 PM	B59060
Iron	0.022	0.0087	0.020		mg/L	1	4/10/2019 5:53:50 PM	B59060
Magnesium	11	0.050	1.0		mg/L	1	4/10/2019 5:53:50 PM	B59060
Manganese	0.59	0.00029	0.0020	*	mg/L	1	4/10/2019 5:53:50 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:53:50 PM	B59060
Nickel	0.0078	0.0040	0.010	J	mg/L	1	4/10/2019 5:53:50 PM	B59060
Potassium	0.30	0.16	1.0	J	mg/L	1	4/10/2019 5:53:50 PM	B59060
Silver	0.0016	0.00094	0.0050	J	mg/L	1	4/10/2019 5:53:50 PM	B59060
Sodium	470	2.1	5.0		mg/L	5	4/5/2019 8:39:18 PM	B58959
Zinc	0.047	0.0023	0.010		mg/L	1	4/10/2019 5:53:50 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.3	0.023	0.10	*	mg/L	5	4/10/2019 7:19:25 PM	44167
Barium	0.047	0.00065	0.0020		mg/L	1	4/10/2019 7:17:12 PM	44167
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 7:17:12 PM	44167
Boron	0.55	0.0045	0.040		mg/L	1	4/10/2019 7:17:12 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 7:17:12 PM	44167

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 10:15:00 AM
Lab ID: 1904008-007
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 7:17:12 PM	44167
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 7:17:12 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 7:17:12 PM	44167
Iron	0.50	0.0087	0.020	*	mg/L	1	4/10/2019 7:17:12 PM	44167
Manganese	0.60	0.00029	0.0020	*	mg/L	1	4/10/2019 7:17:12 PM	44167
Molybdenum	0.0077	0.0067	0.0080	J	mg/L	1	4/10/2019 7:17:12 PM	44167
Nickel	0.0068	0.0040	0.010	J	mg/L	1	4/10/2019 7:17:12 PM	44167
Silver	ND	0.0014	0.0050		mg/L	1	4/10/2019 7:17:12 PM	44167
Zinc	0.016	0.0058	0.010		mg/L	1	4/10/2019 7:17:12 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:47:36 PM	B59066
Arsenic	0.00097	0.00010	0.0010	J	mg/L	1	4/10/2019 8:47:36 PM	B59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 8:47:36 PM	B59066
Selenium	0.00021	0.00017	0.0010	J	mg/L	1	4/10/2019 8:47:36 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:47:36 PM	B59066
Uranium	0.0076	0.000075	0.00050		mg/L	1	4/10/2019 8:47:36 PM	B59066
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/9/2019 2:32:00 PM	44167
Arsenic	0.00091	0.00031	0.0010	J	mg/L	1	4/9/2019 2:32:00 PM	44167
Lead	0.00037	0.000055	0.00050	J	mg/L	1	4/9/2019 2:32:00 PM	44167
Selenium	ND	0.00048	0.0010		mg/L	1	4/9/2019 2:32:00 PM	44167
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 2:32:00 PM	44167
Uranium	0.0087	0.000085	0.00050		mg/L	1	4/9/2019 6:08:23 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000079	0.000038	0.00020	J	mg/L	1	4/11/2019 4:50:11 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Benzoic acid	ND	6.3	20		µg/L	1	4/16/2019 3:08:14 PM	44061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 10:15:00 AM
Lab ID: 1904008-007
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 3:08:14 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 3:08:14 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 3:08:14 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 3:08:14 PM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 3:08:14 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 3:08:14 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 3:08:14 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 3:08:14 PM	44061
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 10:15:00 AM
Lab ID: 1904008-007
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 3:08:14 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 3:08:14 PM	44061
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 3:08:14 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 3:08:14 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 3:08:14 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 3:08:14 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 3:08:14 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 3:08:14 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 3:08:14 PM	44061
Surr: 2-Fluorophenol	34.8	0	15-101		%Rec	1	4/16/2019 3:08:14 PM	44061
Surr: Phenol-d5	26.1	0	15-84.6		%Rec	1	4/16/2019 3:08:14 PM	44061
Surr: 2,4,6-Tribromophenol	47.4	0	27.8-112		%Rec	1	4/16/2019 3:08:14 PM	44061
Surr: Nitrobenzene-d5	45.1	0	33-113		%Rec	1	4/16/2019 3:08:14 PM	44061
Surr: 2-Fluorobiphenyl	38.5	0	26.6-107		%Rec	1	4/16/2019 3:08:14 PM	44061
Surr: 4-Terphenyl-d14	45.3	0	18.7-148		%Rec	1	4/16/2019 3:08:14 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Toluene	ND	0.35	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Methyl tert-butyl ether (MTBE)	4.2	0.46	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2,4-Trimethylbenzene	0.21	0.21	1.0	J	µg/L	1	4/4/2019 7:07:40 PM	R58893
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Naphthalene	ND	0.28	2.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/4/2019 7:07:40 PM	R58893

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 10:15:00 AM
Lab ID: 1904008-007
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	3.6	1.2	10	J	µg/L	1	4/4/2019 7:07:40 PM	R58893
Bromobenzene	ND	0.24	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Bromoform	ND	0.29	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Bromomethane	ND	0.27	3.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
2-Butanone	ND	2.1	10		µg/L	1	4/4/2019 7:07:40 PM	R58893
Carbon disulfide	ND	0.45	10		µg/L	1	4/4/2019 7:07:40 PM	R58893
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Chloroethane	ND	0.18	2.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Chloroform	ND	0.12	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Chloromethane	ND	0.32	3.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Dibromomethane	ND	0.21	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
2-Hexanone	ND	1.5	10		µg/L	1	4/4/2019 7:07:40 PM	R58893
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/4/2019 7:07:40 PM	R58893
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Styrene	ND	0.19	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 10:15:00 AM
Lab ID: 1904008-007
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/4/2019 7:07:40 PM	R58893
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/4/2019 7:07:40 PM	R58893
Surr: 1,2-Dichloroethane-d4	86.0	0	70-130		%Rec	1	4/4/2019 7:07:40 PM	R58893
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	4/4/2019 7:07:40 PM	R58893
Surr: Dibromofluoromethane	84.7	0	70-130		%Rec	1	4/4/2019 7:07:40 PM	R58893
Surr: Toluene-d8	93.8	0	70-130		%Rec	1	4/4/2019 7:07:40 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/4/2019 7:07:40 PM	GA5889
Surr: BFB	101	0	70-130		%Rec	1	4/4/2019 7:07:40 PM	GA5889

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 11:19:00 AM
Lab ID: 1904008-008 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	7.4	0.35	1.0		mg/L	1	4/4/2019 12:09:20 AM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/4/2019 12:09:20 AM	44015
Surr: DNOP	110	0	70-130		%Rec	1	4/4/2019 12:09:20 AM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	4/5/2019 5:58:52 PM	R58947
Chloride	150	10	10		mg/L	20	4/5/2019 6:11:44 PM	R58947
Bromide	1.9	0.068	0.50		mg/L	5	4/5/2019 5:58:52 PM	R58947
Phosphorus, Orthophosphate (As P)	0.34	0.13	2.5	JH	mg/L	5	4/5/2019 5:58:52 PM	R58947
Sulfate	ND	0.32	2.5		mg/L	5	4/5/2019 5:58:52 PM	R58947
Nitrate+Nitrite as N	ND	0.49	1.0		mg/L	5	4/5/2019 9:11:53 PM	R58947
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:55:56 PM	B59060
Barium	4.0	0.0065	0.020	*	mg/L	10	4/5/2019 8:45:48 PM	B58959
Beryllium	0.00030	0.00028	0.0020	J	mg/L	1	4/10/2019 5:55:56 PM	B59060
Boron	0.35	0.0045	0.040		mg/L	1	4/10/2019 5:55:56 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:55:56 PM	B59060
Calcium	130	0.62	10		mg/L	10	4/5/2019 8:45:48 PM	B58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:55:56 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:55:56 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:55:56 PM	B59060
Iron	7.8	0.087	0.20	*	mg/L	10	4/5/2019 8:45:48 PM	B58959
Magnesium	36	0.050	1.0		mg/L	1	4/10/2019 5:55:56 PM	B59060
Manganese	1.9	0.0029	0.020	*	mg/L	10	4/5/2019 8:45:48 PM	B58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:55:56 PM	B59060
Nickel	0.021	0.0040	0.010		mg/L	1	4/10/2019 5:55:56 PM	B59060
Potassium	0.48	0.16	1.0	J	mg/L	1	4/10/2019 5:55:56 PM	B59060
Silver	ND	0.00094	0.0050		mg/L	1	4/10/2019 5:55:56 PM	B59060
Sodium	230	4.2	10		mg/L	10	4/5/2019 8:45:48 PM	B58959
Zinc	0.029	0.0023	0.010		mg/L	1	4/10/2019 5:55:56 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.025	0.0046	0.020		mg/L	1	4/10/2019 7:23:42 PM	44167
Barium	4.3	0.0032	0.010	*	mg/L	5	4/10/2019 7:25:46 PM	44167
Beryllium	0.00034	0.00028	0.0020	J	mg/L	1	4/10/2019 7:23:42 PM	44167
Boron	0.35	0.0045	0.040		mg/L	1	4/10/2019 7:23:42 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 7:23:42 PM	44167
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 7:23:42 PM	44167
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 7:23:42 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 7:23:42 PM	44167

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PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 11:19:00 AM
Lab ID: 1904008-008
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Iron	8.8	0.087	0.20	*	mg/L	10	4/10/2019 7:27:57 PM	44167
Manganese	1.9	0.0014	0.010	*	mg/L	5	4/10/2019 7:25:46 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 7:23:42 PM	44167
Nickel	0.021	0.0040	0.010		mg/L	1	4/10/2019 7:23:42 PM	44167
Silver	ND	0.0014	0.0050		mg/L	1	4/10/2019 7:23:42 PM	44167
Zinc	ND	0.0058	0.010		mg/L	1	4/10/2019 7:23:42 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:50:13 PM	B59066
Arsenic	0.0029	0.00010	0.0010		mg/L	1	4/10/2019 8:50:13 PM	B59066
Lead	ND	0.000055	0.00050		mg/L	1	4/10/2019 8:50:13 PM	B59066
Selenium	0.00022	0.00017	0.0010	J	mg/L	1	4/10/2019 8:50:13 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:50:13 PM	B59066
Uranium	0.00016	0.000075	0.00050	J	mg/L	1	4/10/2019 8:50:13 PM	B59066
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/9/2019 2:34:08 PM	44167
Arsenic	0.0030	0.00031	0.0010		mg/L	1	4/9/2019 2:34:08 PM	44167
Lead	ND	0.000055	0.00050		mg/L	1	4/9/2019 2:34:08 PM	44167
Selenium	ND	0.00048	0.0010		mg/L	1	4/9/2019 2:34:08 PM	44167
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 2:34:08 PM	44167
Uranium	0.00017	0.000085	0.00050	J	mg/L	1	4/9/2019 6:10:30 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000061	0.000038	0.00020	J	mg/L	1	4/11/2019 4:52:29 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Benzoic acid	ND	6.3	20		µg/L	1	4/16/2019 3:37:50 PM	44061
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 11:19:00 AM
Lab ID: 1904008-008
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 3:37:50 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 3:37:50 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 3:37:50 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 3:37:50 PM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 3:37:50 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 3:37:50 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 3:37:50 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 3:37:50 PM	44061
1-Methylnaphthalene	69	7.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2-Methylnaphthalene	51	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 3:37:50 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 3:37:50 PM	44061

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 11:19:00 AM
Lab ID: 1904008-008 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 3:37:50 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 3:37:50 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Naphthalene	110	5.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 3:37:50 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 3:37:50 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Phenol	51	6.0	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 3:37:50 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 3:37:50 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 3:37:50 PM	44061
Surr: 2-Fluorophenol	41.9	0	15-101		%Rec	1	4/16/2019 3:37:50 PM	44061
Surr: Phenol-d5	31.9	0	15-84.6		%Rec	1	4/16/2019 3:37:50 PM	44061
Surr: 2,4,6-Tribromophenol	59.5	0	27.8-112		%Rec	1	4/16/2019 3:37:50 PM	44061
Surr: Nitrobenzene-d5	54.8	0	33-113		%Rec	1	4/16/2019 3:37:50 PM	44061
Surr: 2-Fluorobiphenyl	44.8	0	26.6-107		%Rec	1	4/16/2019 3:37:50 PM	44061
Surr: 4-Terphenyl-d14	55.7	0	18.7-148		%Rec	1	4/16/2019 3:37:50 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	25000	170	1000		µg/L	1E+	4/4/2019 7:36:08 PM	R58893
Toluene	100	35	100	J	µg/L	100	4/4/2019 8:04:36 PM	R58893
Ethylbenzene	1100	13	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Methyl tert-butyl ether (MTBE)	2300	46	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2,4-Trimethylbenzene	37	21	100	J	µg/L	100	4/4/2019 8:04:36 PM	R58893
1,3,5-Trimethylbenzene	ND	19	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2-Dibromoethane (EDB)	ND	17	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Naphthalene	170	28	200	J	µg/L	100	4/4/2019 8:04:36 PM	R58893
1-Methylnaphthalene	93	31	400	J	µg/L	100	4/4/2019 8:04:36 PM	R58893
2-Methylnaphthalene	67	35	400	J	µg/L	100	4/4/2019 8:04:36 PM	R58893
Acetone	ND	120	1000		µg/L	100	4/4/2019 8:04:36 PM	R58893
Bromobenzene	ND	24	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Bromodichloromethane	ND	13	100		µg/L	100	4/4/2019 8:04:36 PM	R58893

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CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 11:19:00 AM
Lab ID: 1904008-008
Matrix: AQUEOUS
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromoform	ND	29	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Bromomethane	ND	27	300		µg/L	100	4/4/2019 8:04:36 PM	R58893
2-Butanone	ND	210	1000		µg/L	100	4/4/2019 8:04:36 PM	R58893
Carbon disulfide	ND	45	1000		µg/L	100	4/4/2019 8:04:36 PM	R58893
Carbon Tetrachloride	ND	14	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Chlorobenzene	ND	19	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Chloroethane	ND	18	200		µg/L	100	4/4/2019 8:04:36 PM	R58893
Chloroform	ND	12	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Chloromethane	ND	32	300		µg/L	100	4/4/2019 8:04:36 PM	R58893
2-Chlorotoluene	ND	25	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
4-Chlorotoluene	ND	23	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
cis-1,2-DCE	ND	19	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
cis-1,3-Dichloropropene	ND	14	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2-Dibromo-3-chloropropane	ND	33	200		µg/L	100	4/4/2019 8:04:36 PM	R58893
Dibromochloromethane	ND	24	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Dibromomethane	ND	21	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2-Dichlorobenzene	ND	30	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,3-Dichlorobenzene	ND	25	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,4-Dichlorobenzene	ND	29	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Dichlorodifluoromethane	ND	26	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,1-Dichloroethane	ND	14	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,1-Dichloroethene	ND	21	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2-Dichloropropane	ND	21	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,3-Dichloropropane	ND	20	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
2,2-Dichloropropane	ND	23	200		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,1-Dichloropropene	ND	16	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Hexachlorobutadiene	ND	31	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
2-Hexanone	ND	150	1000		µg/L	100	4/4/2019 8:04:36 PM	R58893
Isopropylbenzene	20	19	100	J	µg/L	100	4/4/2019 8:04:36 PM	R58893
4-Isopropyltoluene	ND	22	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	4/4/2019 8:04:36 PM	R58893
Methylene Chloride	ND	15	300		µg/L	100	4/4/2019 8:04:36 PM	R58893
n-Butylbenzene	ND	23	300		µg/L	100	4/4/2019 8:04:36 PM	R58893
n-Propylbenzene	83	21	100	J	µg/L	100	4/4/2019 8:04:36 PM	R58893
sec-Butylbenzene	ND	25	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Styrene	ND	19	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
tert-Butylbenzene	ND	21	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,1,1,2-Tetrachloroethane	ND	21	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,1,2,2-Tetrachloroethane	ND	55	200		µg/L	100	4/4/2019 8:04:36 PM	R58893

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 11:19:00 AM
Lab ID: 1904008-008 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
trans-1,2-DCE	ND	18	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
trans-1,3-Dichloropropene	ND	17	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2,3-Trichlorobenzene	ND	30	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2,4-Trichlorobenzene	ND	20	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,1,1-Trichloroethane	ND	17	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,1,2-Trichloroethane	ND	22	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Trichloroethene (TCE)	ND	17	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Trichlorofluoromethane	ND	19	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
1,2,3-Trichloropropane	ND	30	200		µg/L	100	4/4/2019 8:04:36 PM	R58893
Vinyl chloride	ND	18	100		µg/L	100	4/4/2019 8:04:36 PM	R58893
Xylenes, Total	160	45	150		µg/L	100	4/4/2019 8:04:36 PM	R58893
Surr: 1,2-Dichloroethane-d4	87.0	0	70-130		%Rec	100	4/4/2019 8:04:36 PM	R58893
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	100	4/4/2019 8:04:36 PM	R58893
Surr: Dibromofluoromethane	83.8	0	70-130		%Rec	100	4/4/2019 8:04:36 PM	R58893
Surr: Toluene-d8	96.5	0	70-130		%Rec	100	4/4/2019 8:04:36 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	57	3.1	5.0		mg/L	100	4/4/2019 8:04:36 PM	GA588
Surr: BFB	100	0	70-130		%Rec	100	4/4/2019 8:04:36 PM	GA588

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:25:00 PM
Lab ID: 1904008-009
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.0086	0.0033	0.0094	J	µg/L	1	4/3/2019 5:35:01 PM	44035
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.8	0.35	1.0		mg/L	1	4/4/2019 12:31:09 AM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/4/2019 12:31:09 AM	44015
Surr: DNOP	109	0	70-130		%Rec	1	4/4/2019 12:31:09 AM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.2	0.25	0.50		mg/L	5	4/5/2019 6:24:35 PM	R58947
Chloride	1400	50	50		mg/L	100	4/10/2019 1:05:45 AM	R59031
Bromide	0.76	0.068	0.50		mg/L	5	4/5/2019 6:24:35 PM	R58947
Phosphorus, Orthophosphate (As P)	0.29	0.13	2.5	JH	mg/L	5	4/5/2019 6:24:35 PM	R58947
Sulfate	52	0.32	2.5		mg/L	5	4/5/2019 6:24:35 PM	R58947
Nitrate+Nitrite as N	ND	0.49	1.0		mg/L	5	4/5/2019 9:24:45 PM	R58947
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 5:57:53 PM	B59060
Barium	0.99	0.00065	0.0020		mg/L	1	4/10/2019 5:57:53 PM	B59060
Beryllium	0.00041	0.00028	0.0020	J	mg/L	1	4/10/2019 5:57:53 PM	B59060
Boron	0.71	0.0045	0.040		mg/L	1	4/10/2019 5:57:53 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 5:57:53 PM	B59060
Calcium	170	0.31	5.0		mg/L	5	4/5/2019 8:59:25 PM	B58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 5:57:53 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 5:57:53 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 5:57:53 PM	B59060
Iron	0.42	0.0087	0.020	*	mg/L	1	4/10/2019 5:57:53 PM	B59060
Magnesium	28	0.050	1.0		mg/L	1	4/10/2019 5:57:53 PM	B59060
Manganese	1.6	0.0014	0.010	*	mg/L	5	4/5/2019 8:59:25 PM	B58959
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 5:57:53 PM	B59060
Nickel	0.012	0.0040	0.010		mg/L	1	4/10/2019 5:57:53 PM	B59060
Potassium	2.3	0.16	1.0		mg/L	1	4/10/2019 5:57:53 PM	B59060
Silver	0.0026	0.00094	0.0050	J	mg/L	1	4/10/2019 5:57:53 PM	B59060
Sodium	890	4.2	10		mg/L	10	4/5/2019 9:01:37 PM	B58959
Zinc	0.025	0.0023	0.010		mg/L	1	4/10/2019 5:57:53 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.022	0.0046	0.020		mg/L	1	4/10/2019 7:30:08 PM	44167
Barium	1.0	0.0032	0.010		mg/L	5	4/10/2019 7:32:12 PM	44167
Beryllium	0.00038	0.00028	0.0020	J	mg/L	1	4/10/2019 7:30:08 PM	44167
Boron	0.73	0.0045	0.040		mg/L	1	4/10/2019 7:30:08 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 7:30:08 PM	44167

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:25:00 PM
Lab ID: 1904008-009
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 7:30:08 PM	44167
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 7:30:08 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 7:30:08 PM	44167
Iron	1.6	0.044	0.10	*	mg/L	5	4/10/2019 7:32:12 PM	44167
Manganese	1.5	0.0014	0.010	*	mg/L	5	4/10/2019 7:32:12 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 7:30:08 PM	44167
Nickel	0.013	0.0040	0.010		mg/L	1	4/10/2019 7:30:08 PM	44167
Silver	0.0025	0.0014	0.0050	J	mg/L	1	4/10/2019 7:30:08 PM	44167
Zinc	ND	0.0058	0.010		mg/L	1	4/10/2019 7:30:08 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:52:51 PM	B59066
Arsenic	0.0018	0.00010	0.0010		mg/L	1	4/10/2019 8:52:51 PM	B59066
Lead	0.000070	0.000055	0.00050	J	mg/L	1	4/10/2019 8:52:51 PM	B59066
Selenium	0.00050	0.00017	0.0010	J	mg/L	1	4/10/2019 8:52:51 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:52:51 PM	B59066
Uranium	0.023	0.000075	0.00050		mg/L	1	4/10/2019 8:52:51 PM	B59066
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/9/2019 6:12:38 PM	44167
Arsenic	0.0026	0.00031	0.0010		mg/L	1	4/9/2019 2:36:15 PM	44167
Lead	0.00022	0.000055	0.00050	J	mg/L	1	4/9/2019 6:12:38 PM	44167
Selenium	0.00059	0.00048	0.0010	J	mg/L	1	4/9/2019 2:36:15 PM	44167
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 6:12:38 PM	44167
Uranium	0.023	0.00042	0.0025		mg/L	5	4/15/2019 5:24:47 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000087	0.000038	0.00020	J	mg/L	1	4/11/2019 4:54:47 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Benzoic acid	ND	6.3	20		µg/L	1	4/16/2019 4:07:28 PM	44061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:25:00 PM
Lab ID: 1904008-009
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 4:07:28 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 4:07:28 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 4:07:28 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 4:07:28 PM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 4:07:28 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 4:07:28 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 4:07:28 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 4:07:28 PM	44061
1-Methylnaphthalene	8.9	7.0	10	J	µg/L	1	4/16/2019 4:07:28 PM	44061

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:25:00 PM
Lab ID: 1904008-009
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 4:07:28 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 4:07:28 PM	44061
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 4:07:28 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 4:07:28 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 4:07:28 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 4:07:28 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Phenol	8.3	6.0	10	J	µg/L	1	4/16/2019 4:07:28 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 4:07:28 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 4:07:28 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 4:07:28 PM	44061
Surr: 2-Fluorophenol	44.0	0	15-101		%Rec	1	4/16/2019 4:07:28 PM	44061
Surr: Phenol-d5	32.2	0	15-84.6		%Rec	1	4/16/2019 4:07:28 PM	44061
Surr: 2,4,6-Tribromophenol	57.7	0	27.8-112		%Rec	1	4/16/2019 4:07:28 PM	44061
Surr: Nitrobenzene-d5	60.3	0	33-113		%Rec	1	4/16/2019 4:07:28 PM	44061
Surr: 2-Fluorobiphenyl	50.6	0	26.6-107		%Rec	1	4/16/2019 4:07:28 PM	44061
Surr: 4-Terphenyl-d14	56.9	0	18.7-148		%Rec	1	4/16/2019 4:07:28 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	620	3.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Toluene	16	7.0	20	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
Ethylbenzene	10	2.6	20	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
Methyl tert-butyl ether (MTBE)	47	9.1	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2,4-Trimethylbenzene	130	4.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,3,5-Trimethylbenzene	24	3.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2-Dichloroethane (EDC)	6.9	3.9	20	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Naphthalene	9.5	5.5	40	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
1-Methylnaphthalene	9.3	6.3	80	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
2-Methylnaphthalene	ND	6.9	80		µg/L	20	4/4/2019 9:01:44 PM	R58893

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:25:00 PM
Lab ID: 1904008-009
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	ND	24	200		µg/L	20	4/4/2019 9:01:44 PM	R58893
Bromobenzene	ND	4.9	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Bromodichloromethane	ND	2.7	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Bromoform	ND	5.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Bromomethane	ND	5.5	60		µg/L	20	4/4/2019 9:01:44 PM	R58893
2-Butanone	ND	42	200		µg/L	20	4/4/2019 9:01:44 PM	R58893
Carbon disulfide	ND	9.1	200		µg/L	20	4/4/2019 9:01:44 PM	R58893
Carbon Tetrachloride	ND	2.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Chlorobenzene	ND	3.9	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Chloroethane	ND	3.6	40		µg/L	20	4/4/2019 9:01:44 PM	R58893
Chloroform	ND	2.4	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Chloromethane	ND	6.4	60		µg/L	20	4/4/2019 9:01:44 PM	R58893
2-Chlorotoluene	ND	4.9	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
4-Chlorotoluene	ND	4.7	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
cis-1,2-DCE	ND	3.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	4/4/2019 9:01:44 PM	R58893
Dibromochloromethane	ND	4.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Dibromomethane	ND	4.2	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,1-Dichloroethane	16	2.8	20	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
1,1-Dichloroethene	7.3	4.1	20	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2-Dichloropropane	ND	4.2	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,3-Dichloropropane	ND	4.0	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
2,2-Dichloropropane	ND	4.7	40		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,1-Dichloropropene	ND	3.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Hexachlorobutadiene	ND	6.2	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
2-Hexanone	ND	31	200		µg/L	20	4/4/2019 9:01:44 PM	R58893
Isopropylbenzene	ND	3.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
4-Isopropyltoluene	ND	4.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
4-Methyl-2-pentanone	ND	14	200		µg/L	20	4/4/2019 9:01:44 PM	R58893
Methylene Chloride	ND	3.1	60		µg/L	20	4/4/2019 9:01:44 PM	R58893
n-Butylbenzene	ND	4.6	60		µg/L	20	4/4/2019 9:01:44 PM	R58893
n-Propylbenzene	ND	4.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
sec-Butylbenzene	ND	5.0	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Styrene	ND	3.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:25:00 PM
Lab ID: 1904008-009 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	4.1	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	4/4/2019 9:01:44 PM	R58893
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
trans-1,2-DCE	ND	3.6	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
Trichlorofluoromethane	ND	3.8	20		µg/L	20	4/4/2019 9:01:44 PM	R58893
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	4/4/2019 9:01:44 PM	R58893
Vinyl chloride	13	3.6	20	J	µg/L	20	4/4/2019 9:01:44 PM	R58893
Xylenes, Total	130	9.1	30		µg/L	20	4/4/2019 9:01:44 PM	R58893
Surr: 1,2-Dichloroethane-d4	86.7	0	70-130		%Rec	20	4/4/2019 9:01:44 PM	R58893
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	20	4/4/2019 9:01:44 PM	R58893
Surr: Dibromofluoromethane	84.6	0	70-130		%Rec	20	4/4/2019 9:01:44 PM	R58893
Surr: Toluene-d8	95.1	0	70-130		%Rec	20	4/4/2019 9:01:44 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	4.1	0.61	1.0		mg/L	20	4/4/2019 9:01:44 PM	GA5889
Surr: BFB	101	0	70-130		%Rec	20	4/4/2019 9:01:44 PM	GA5889

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:50:00 PM
Lab ID: 1904008-010 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	4/3/2019 5:50:02 PM	44035
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.48	0.35	1.0	J	mg/L	1	4/4/2019 12:53:06 AM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/4/2019 12:53:06 AM	44015
Surr: DNOP	106	0	70-130		%Rec	1	4/4/2019 12:53:06 AM	44015
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	4/5/2019 6:50:19 PM	R58947
Chloride	3500	250	250		mg/L	500	4/10/2019 1:18:10 AM	R59031
Bromide	0.86	0.27	2.0	J	mg/L	20	4/5/2019 7:03:11 PM	R58947
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5	H	mg/L	5	4/5/2019 6:50:19 PM	R58947
Sulfate	1200	32	250		mg/L	500	4/10/2019 1:18:10 AM	R59031
Nitrate+Nitrite as N	8.1	2.0	4.0		mg/L	20	4/11/2019 4:17:22 AM	R59038
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 6:00:08 PM	B59060
Barium	0.039	0.00065	0.0020		mg/L	1	4/10/2019 6:00:08 PM	B59060
Beryllium	0.00049	0.00028	0.0020	J	mg/L	1	4/10/2019 6:00:08 PM	B59060
Boron	0.22	0.0045	0.040		mg/L	1	4/10/2019 6:00:08 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 6:00:08 PM	B59060
Calcium	400	0.31	5.0		mg/L	5	4/5/2019 9:06:11 PM	B58959
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:00:08 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:00:08 PM	B59060
Copper	0.011	0.0013	0.0060		mg/L	1	4/10/2019 6:00:08 PM	B59060
Iron	0.12	0.0087	0.020		mg/L	1	4/10/2019 6:00:08 PM	B59060
Magnesium	71	0.050	1.0		mg/L	1	4/10/2019 6:00:08 PM	B59060
Manganese	0.011	0.00029	0.0020		mg/L	1	4/10/2019 6:00:08 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:00:08 PM	B59060
Nickel	0.026	0.0040	0.010		mg/L	1	4/10/2019 6:00:08 PM	B59060
Potassium	7.9	0.16	1.0		mg/L	1	4/10/2019 6:00:08 PM	B59060
Silver	0.0064	0.00094	0.0050		mg/L	1	4/10/2019 6:00:08 PM	B59060
Sodium	2400	21	50		mg/L	50	4/5/2019 9:10:51 PM	B58959
Zinc	0.019	0.0023	0.010		mg/L	1	4/10/2019 6:00:08 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.97	0.023	0.10	*	mg/L	5	4/10/2019 7:45:32 PM	44167
Barium	0.055	0.00065	0.0020		mg/L	1	4/10/2019 7:43:28 PM	44167
Beryllium	0.00058	0.00028	0.0020	J	mg/L	1	4/10/2019 7:43:28 PM	44167
Boron	0.26	0.0045	0.040		mg/L	1	4/10/2019 7:43:28 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 7:43:28 PM	44167

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:50:00 PM
Lab ID: 1904008-010
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 7:43:28 PM	44167
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 7:43:28 PM	44167
Copper	0.0093	0.0041	0.0060		mg/L	1	4/10/2019 7:43:28 PM	44167
Iron	1.1	0.044	0.10	*	mg/L	5	4/10/2019 7:45:32 PM	44167
Manganese	0.077	0.00029	0.0020	*	mg/L	1	4/10/2019 7:43:28 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 7:43:28 PM	44167
Nickel	0.023	0.0040	0.010		mg/L	1	4/10/2019 7:43:28 PM	44167
Silver	0.0066	0.0014	0.0050		mg/L	1	4/10/2019 7:43:28 PM	44167
Zinc	ND	0.0058	0.010		mg/L	1	4/10/2019 7:43:28 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	4/11/2019 9:06:50 PM	A59102
Arsenic	0.0017	0.00050	0.0050	J	mg/L	5	4/11/2019 9:06:50 PM	A59102
Lead	ND	0.00027	0.0025		mg/L	5	4/11/2019 9:06:50 PM	A59102
Selenium	0.0049	0.00086	0.0050	J	mg/L	5	4/11/2019 9:06:50 PM	A59102
Thallium	ND	0.00024	0.0025		mg/L	5	4/11/2019 9:06:50 PM	A59102
Uranium	0.025	0.00037	0.0025		mg/L	5	4/11/2019 9:06:50 PM	A59102
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	4/9/2019 6:14:45 PM	44167
Arsenic	ND	0.0016	0.0050		mg/L	5	4/9/2019 6:14:45 PM	44167
Lead	0.00089	0.00027	0.0025	J	mg/L	5	4/9/2019 6:14:45 PM	44167
Selenium	0.0055	0.0024	0.0050		mg/L	5	4/9/2019 6:14:45 PM	44167
Thallium	ND	0.00026	0.0025		mg/L	5	4/9/2019 6:14:45 PM	44167
Uranium	0.028	0.00042	0.0025		mg/L	5	4/9/2019 6:14:45 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	4/11/2019 5:01:44 PM	44281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Acenaphthylene	ND	6.2	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Aniline	ND	6.2	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Anthracene	ND	5.7	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Azobenzene	ND	6.7	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Benzoic acid	7.6	6.3	20	J	µg/L	1	4/16/2019 4:37:01 PM	44061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:50:00 PM
Lab ID: 1904008-010
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/16/2019 4:37:01 PM	44061
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Carbazole	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/16/2019 4:37:01 PM	44061
4-Chloroaniline	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2-Chlorophenol	ND	5.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Chrysene	ND	6.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Dibenzofuran	ND	6.9	10		µg/L	1	4/16/2019 4:37:01 PM	44061
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Diethyl phthalate	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/16/2019 4:37:01 PM	44061
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/16/2019 4:37:01 PM	44061
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/16/2019 4:37:01 PM	44061
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/16/2019 4:37:01 PM	44061
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Fluoranthene	ND	5.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Fluorene	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Hexachloroethane	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Isophorone	ND	6.2	10		µg/L	1	4/16/2019 4:37:01 PM	44061
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:50:00 PM
Lab ID: 1904008-010
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2-Methylphenol	ND	6.3	10		µg/L	1	4/16/2019 4:37:01 PM	44061
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/16/2019 4:37:01 PM	44061
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/16/2019 4:37:01 PM	44061
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/16/2019 4:37:01 PM	44061
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Naphthalene	ND	5.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2-Nitroaniline	ND	5.9	10		µg/L	1	4/16/2019 4:37:01 PM	44061
3-Nitroaniline	ND	6.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
4-Nitroaniline	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Nitrobenzene	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2-Nitrophenol	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
4-Nitrophenol	ND	5.6	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Pentachlorophenol	ND	5.3	20		µg/L	1	4/16/2019 4:37:01 PM	44061
Phenanthrene	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Phenol	ND	6.0	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Pyrene	ND	6.5	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Pyridine	ND	5.4	10		µg/L	1	4/16/2019 4:37:01 PM	44061
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/16/2019 4:37:01 PM	44061
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/16/2019 4:37:01 PM	44061
Surr: 2-Fluorophenol	4.74	0	15-101	S	%Rec	1	4/16/2019 4:37:01 PM	44061
Surr: Phenol-d5	13.1	0	15-84.6	S	%Rec	1	4/16/2019 4:37:01 PM	44061
Surr: 2,4,6-Tribromophenol	6.21	0	27.8-112	S	%Rec	1	4/16/2019 4:37:01 PM	44061
Surr: Nitrobenzene-d5	52.6	0	33-113		%Rec	1	4/16/2019 4:37:01 PM	44061
Surr: 2-Fluorobiphenyl	41.7	0	26.6-107		%Rec	1	4/16/2019 4:37:01 PM	44061
Surr: 4-Terphenyl-d14	53.9	0	18.7-148		%Rec	1	4/16/2019 4:37:01 PM	44061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Toluene	ND	0.35	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Methyl tert-butyl ether (MTBE)	1.8	0.46	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Naphthalene	ND	0.28	2.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	4/4/2019 9:30:15 PM	R58893

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:50:00 PM
Lab ID: 1904008-010
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	5.4	1.2	10	J	µg/L	1	4/4/2019 9:30:15 PM	R58893
Bromobenzene	ND	0.24	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Bromodichloromethane	ND	0.13	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Bromoform	ND	0.29	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Bromomethane	ND	0.27	3.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
2-Butanone	ND	2.1	10		µg/L	1	4/4/2019 9:30:15 PM	R58893
Carbon disulfide	ND	0.45	10		µg/L	1	4/4/2019 9:30:15 PM	R58893
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Chlorobenzene	ND	0.19	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Chloroethane	ND	0.18	2.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Chloroform	ND	0.12	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Chloromethane	ND	0.32	3.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Dibromochloromethane	ND	0.24	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Dibromomethane	ND	0.21	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
2-Hexanone	ND	1.5	10		µg/L	1	4/4/2019 9:30:15 PM	R58893
Isopropylbenzene	ND	0.19	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	4/4/2019 9:30:15 PM	R58893
Methylene Chloride	ND	0.15	3.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
n-Butylbenzene	ND	0.23	3.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
n-Propylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Styrene	ND	0.19	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 1st QTR GW Sampling
Collection Date: 3/28/2019 12:50:00 PM
Lab ID: 1904008-010 **Matrix:** AQUEOUS **Received Date:** 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Vinyl chloride	ND	0.18	1.0		µg/L	1	4/4/2019 9:30:15 PM	R58893
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/4/2019 9:30:15 PM	R58893
Surr: 1,2-Dichloroethane-d4	86.9	0	70-130		%Rec	1	4/4/2019 9:30:15 PM	R58893
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	4/4/2019 9:30:15 PM	R58893
Surr: Dibromofluoromethane	83.8	0	70-130		%Rec	1	4/4/2019 9:30:15 PM	R58893
Surr: Toluene-d8	96.0	0	70-130		%Rec	1	4/4/2019 9:30:15 PM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	4/4/2019 9:30:15 PM	GA5889
Surr: BFB	99.2	0	70-130		%Rec	1	4/4/2019 9:30:15 PM	GA5889

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/27/2019 3:56:00 PM
Lab ID: 1904008-011
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/3/2019 6:05:03 PM	44035
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.92	0.35	1.0	J	mg/L	1	4/4/2019 1:14:57 AM	44015
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/4/2019 1:14:57 AM	44015
Surr: DNOP	106	0	70-130		%Rec	1	4/4/2019 1:14:57 AM	44015
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/10/2019 6:02:21 PM	B59060
Barium	0.13	0.00065	0.0020		mg/L	1	4/10/2019 6:02:21 PM	B59060
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 6:02:21 PM	B59060
Boron	0.54	0.0045	0.040		mg/L	1	4/10/2019 6:02:21 PM	B59060
Cadmium	ND	0.00055	0.0020		mg/L	1	4/10/2019 6:02:21 PM	B59060
Calcium	72	0.062	1.0		mg/L	1	4/10/2019 6:02:21 PM	B59060
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 6:02:21 PM	B59060
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 6:02:21 PM	B59060
Copper	ND	0.0013	0.0060		mg/L	1	4/10/2019 6:02:21 PM	B59060
Iron	0.055	0.0087	0.020		mg/L	1	4/10/2019 6:02:21 PM	B59060
Magnesium	17	0.050	1.0		mg/L	1	4/10/2019 6:02:21 PM	B59060
Manganese	0.068	0.00029	0.0020	*	mg/L	1	4/10/2019 6:02:21 PM	B59060
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 6:02:21 PM	B59060
Nickel	0.039	0.0040	0.010		mg/L	1	4/10/2019 6:02:21 PM	B59060
Potassium	0.27	0.16	1.0	J	mg/L	1	4/10/2019 6:02:21 PM	B59060
Silver	0.0014	0.00094	0.0050	J	mg/L	1	4/10/2019 6:02:21 PM	B59060
Sodium	350	2.1	5.0		mg/L	5	4/5/2019 9:13:04 PM	B58959
Zinc	0.034	0.0023	0.010		mg/L	1	4/10/2019 6:02:21 PM	B59060
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.29	0.0046	0.020	*	mg/L	1	4/10/2019 7:50:19 PM	44167
Barium	0.14	0.00065	0.0020		mg/L	1	4/10/2019 7:50:19 PM	44167
Beryllium	ND	0.00028	0.0020		mg/L	1	4/10/2019 7:50:19 PM	44167
Boron	0.56	0.0045	0.040		mg/L	1	4/10/2019 7:50:19 PM	44167
Cadmium	ND	0.00074	0.0020		mg/L	1	4/10/2019 7:50:19 PM	44167
Chromium	ND	0.0015	0.0060		mg/L	1	4/10/2019 7:50:19 PM	44167
Cobalt	ND	0.0031	0.0060		mg/L	1	4/10/2019 7:50:19 PM	44167
Copper	ND	0.0041	0.0060		mg/L	1	4/10/2019 7:50:19 PM	44167
Iron	0.17	0.0087	0.020		mg/L	1	4/10/2019 7:50:19 PM	44167
Manganese	0.073	0.00029	0.0020	*	mg/L	1	4/10/2019 7:50:19 PM	44167
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/10/2019 7:50:19 PM	44167
Nickel	0.040	0.0040	0.010		mg/L	1	4/10/2019 7:50:19 PM	44167
Silver	ND	0.0014	0.0050		mg/L	1	4/10/2019 7:50:19 PM	44167

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/27/2019 3:56:00 PM
Lab ID: 1904008-011
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	4/10/2019 7:50:19 PM	44167
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/10/2019 8:58:05 PM	B59066
Arsenic	0.00069	0.00010	0.0010	J	mg/L	1	4/10/2019 8:58:05 PM	B59066
Lead	0.00041	0.000055	0.00050	J	mg/L	1	4/10/2019 8:58:05 PM	B59066
Selenium	ND	0.00017	0.0010		mg/L	1	4/10/2019 8:58:05 PM	B59066
Thallium	ND	0.000048	0.00050		mg/L	1	4/10/2019 8:58:05 PM	B59066
Uranium	0.036	0.00037	0.0025	*	mg/L	5	4/11/2019 9:09:28 PM	A59102
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/9/2019 2:44:47 PM	44167
Arsenic	0.00080	0.00031	0.0010	J	mg/L	1	4/9/2019 2:44:47 PM	44167
Lead	0.00059	0.000055	0.00050		mg/L	1	4/9/2019 2:44:47 PM	44167
Selenium	ND	0.00048	0.0010		mg/L	1	4/9/2019 2:44:47 PM	44167
Thallium	ND	0.000052	0.00050		mg/L	1	4/9/2019 2:44:47 PM	44167
Uranium	0.040	0.00042	0.0025	*	mg/L	5	4/9/2019 6:16:52 PM	44167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	4/11/2019 5:03:55 PM	44281
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.83	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Toluene	ND	1.8	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Ethylbenzene	ND	0.66	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Methyl tert-butyl ether (MTBE)	2300	23	50		µg/L	50	4/5/2019 12:21:25 AM	R58893
1,2,4-Trimethylbenzene	1.2	1.1	5.0	J	µg/L	5	4/5/2019 12:49:59 AM	R58893
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Naphthalene	ND	1.4	10		µg/L	5	4/5/2019 12:49:59 AM	R58893
1-Methylnaphthalene	ND	1.6	20		µg/L	5	4/5/2019 12:49:59 AM	R58893
2-Methylnaphthalene	ND	1.7	20		µg/L	5	4/5/2019 12:49:59 AM	R58893
Acetone	ND	6.0	50		µg/L	5	4/5/2019 12:49:59 AM	R58893
Bromobenzene	ND	1.2	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Bromodichloromethane	ND	0.67	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Bromoform	ND	1.4	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Bromomethane	ND	1.4	15		µg/L	5	4/5/2019 12:49:59 AM	R58893
2-Butanone	ND	10	50		µg/L	5	4/5/2019 12:49:59 AM	R58893
Carbon disulfide	ND	2.3	50		µg/L	5	4/5/2019 12:49:59 AM	R58893
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/27/2019 3:56:00 PM
Lab ID: 1904008-011
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	0.97	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Chloroethane	ND	0.89	10		µg/L	5	4/5/2019 12:49:59 AM	R58893
Chloroform	ND	0.61	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Chloromethane	ND	1.6	15		µg/L	5	4/5/2019 12:49:59 AM	R58893
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	4/5/2019 12:49:59 AM	R58893
Dibromochloromethane	ND	1.2	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Dibromomethane	ND	1.0	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
2,2-Dichloropropane	ND	1.2	10		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
2-Hexanone	ND	7.7	50		µg/L	5	4/5/2019 12:49:59 AM	R58893
Isopropylbenzene	ND	0.96	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	4/5/2019 12:49:59 AM	R58893
Methylene Chloride	ND	0.77	15		µg/L	5	4/5/2019 12:49:59 AM	R58893
n-Butylbenzene	ND	1.1	15		µg/L	5	4/5/2019 12:49:59 AM	R58893
n-Propylbenzene	ND	1.1	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Styrene	ND	0.96	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	4/5/2019 12:49:59 AM	R58893
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 1st QTR GW Sampling
Collection Date: 3/27/2019 3:56:00 PM
Lab ID: 1904008-011
Matrix: AQUEOUS
Received Date: 3/28/2019 4:12:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	4/5/2019 12:49:59 AM	R58893
Vinyl chloride	ND	0.90	5.0		µg/L	5	4/5/2019 12:49:59 AM	R58893
Xylenes, Total	ND	2.3	7.5		µg/L	5	4/5/2019 12:49:59 AM	R58893
Surr: 1,2-Dichloroethane-d4	86.4	0	70-130		%Rec	5	4/5/2019 12:49:59 AM	R58893
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	5	4/5/2019 12:49:59 AM	R58893
Surr: Dibromofluoromethane	82.8	0	70-130		%Rec	5	4/5/2019 12:49:59 AM	R58893
Surr: Toluene-d8	94.9	0	70-130		%Rec	5	4/5/2019 12:49:59 AM	R58893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	1.9	0.15	0.25		mg/L	5	4/5/2019 12:49:59 AM	GA588
Surr: BFB	101	0	70-130		%Rec	5	4/5/2019 12:49:59 AM	GA588

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

Qualifiers:

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

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0818		0.00500	1	04/10/2019 10:02	WG1262613

Method Blank (MB)

(MB) R3400146-1 04/10/19 09:49

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1084680-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1084680-01 04/10/19 10:03 • (DUP) R3400146-3 04/10/19 10:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1084710-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1084710-03 04/10/19 10:16 • (DUP) R3400146-8 04/10/19 10:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3400146-2 04/10/19 09:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.109	109	85.0-115	

L1084680-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1084680-02 04/10/19 10:05 • (MS) R3400146-4 04/10/19 10:06 • (MSD) R3400146-5 04/10/19 10:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.102	0.0981	102	98.1	1	75.0-125			3.90	20

L1084710-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1084710-01 04/10/19 10:10 • (MS) R3400146-6 04/10/19 10:11 • (MSD) R3400146-7 04/10/19 10:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0955	0.0968	95.5	96.8	1	75.0-125			1.35	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**

11-Jun-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-44167** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **44167** RunNo: **59029**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-44167** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **44167** RunNo: **59029**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986512** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	110	50	150			J
Barium	0.0015	0.0020	0.002000	0	76.1	50	150			J
Beryllium	0.0017	0.0020	0.002000	0	86.1	50	150			J
Boron	0.038	0.040	0.04000	0	95.2	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Chromium	0.0050	0.0060	0.006000	0	82.6	50	150			J
Cobalt	0.0059	0.0060	0.006000	0	99.1	50	150			J
Copper	0.0054	0.0060	0.006000	0	90.5	50	150			J
Iron	0.026	0.020	0.02000	0	129	50	150			
Manganese	0.0018	0.0020	0.002000	0	92.4	50	150			J
Molybdenum	0.0089	0.0080	0.008000	0	111	50	150			
Silver	0.0047	0.0050	0.005000	0	94.1	50	150			J

Sample ID: **LCS-44167** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **44167** RunNo: **59029**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	85	115			
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Beryllium	0.49	0.0020	0.5000	0	99.0	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**

11-Jun-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-44167** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **44167** RunNo: **59029**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.1	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Cobalt	0.49	0.0060	0.5000	0	97.3	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0	99.9	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.7	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.48	0.010	0.5000	0	96.8	85	115			

Sample ID: **LLLCS-44167** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **44167** RunNo: **59029**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.011	0.010	0.005000	0	227	50	150			S

Sample ID: **MB-44167** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **44167** RunNo: **59128**

Prep Date: **4/5/2019** Analysis Date: **4/12/2019** SeqNo: **1990201** Units: **mg/L**

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

Sample ID: **LCS-44167** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **44167** RunNo: **59128**

Prep Date: **4/5/2019** Analysis Date: **4/12/2019** SeqNo: **1990207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nickel	0.48	0.010	0.5000	0	96.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B58959** RunNo: **58959**
Prep Date: Analysis Date: **4/5/2019** SeqNo: **1983214** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Boron	ND	0.040								
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B58959** RunNo: **58959**
Prep Date: Analysis Date: **4/5/2019** SeqNo: **1983215** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	91.5	50	150			J
Boron	0.039	0.040	0.04000	0	98.2	50	150			J
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Iron	0.021	0.020	0.02000	0	105	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Sodium	0.53	1.0	0.5000	0	106	50	150			J

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B58959** RunNo: **58959**
Prep Date: Analysis Date: **4/5/2019** SeqNo: **1983216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.6	85	115			
Boron	0.49	0.040	0.5000	0	98.0	85	115			
Calcium	49	1.0	50.00	0	99.0	85	115			
Iron	0.48	0.020	0.5000	0	95.9	85	115			
Manganese	0.48	0.0020	0.5000	0	95.9	85	115			
Sodium	49	1.0	50.00	0	98.0	85	115			

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B59060** RunNo: **59060**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1987937** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987937** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	122	50	150			J
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Beryllium	0.0021	0.0020	0.002000	0	107	50	150			
Boron	0.040	0.040	0.04000	0	99.2	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	111	50	150			
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.6	50	150			J
Cobalt	0.0048	0.0060	0.006000	0	80.3	50	150			J
Copper	0.0057	0.0060	0.006000	0	95.4	50	150			J
Iron	0.021	0.020	0.02000	0	105	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	107	50	150			
Molybdenum	0.0095	0.0080	0.008000	0	119	50	150			
Nickel	0.0042	0.010	0.005000	0	84.9	50	150			J
Potassium	0.43	1.0	0.5000	0	86.0	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Zinc	0.0054	0.010	0.005000	0	108	50	150			J

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B59060**	RunNo: **59060**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	96.0	85	115			
Beryllium	0.49	0.0020	0.5000	0	99.0	85	115			
Boron	0.48	0.040	0.5000	0	95.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.9	85	115			
Calcium	50	1.0	50.00	0	99.1	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.9	85	115			
Molybdenum	0.50	0.0080	0.5000	0	99.0	85	115			
Nickel	0.49	0.010	0.5000	0	97.9	85	115			
Potassium	50	1.0	50.00	0	99.4	85	115			
Silver	0.098	0.0050	0.1000	0	97.5	85	115			
Zinc	0.49	0.010	0.5000	0	97.3	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**

11-Jun-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-44167** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **44167** RunNo: **59028**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986748** Units: **mg/L**

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

Sample ID: **MSLLLCS-44167** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **44167** RunNo: **59028**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986750** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00095	0.0010	0.001000	0	94.5	50	150			J
Arsenic	0.00094	0.0010	0.001000	0	94.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.2	50	150			J
Selenium	0.0012	0.0010	0.001000	0	117	50	150			
Thallium	0.00044	0.00050	0.0005000	0	88.9	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J

Sample ID: **MSLCS-44167** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **44167** RunNo: **59028**

Prep Date: **4/5/2019** Analysis Date: **4/9/2019** SeqNo: **1986752** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.9	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	96.7	85	115			
Thallium	0.012	0.00050	0.01250	0	98.7	85	115			
Uranium	0.012	0.00050	0.01250	0	99.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988069** Units: **mg/L**

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

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988070** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00057	0.0010	0.001000	0	57.0	50	150			J
Arsenic	0.00085	0.0010	0.001000	0	84.9	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.4	50	150			J
Selenium	0.0011	0.0010	0.001000	0	115	50	150			
Thallium	0.00042	0.00050	0.0005000	0	83.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.5	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B59066** RunNo: **59066**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988071** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	90.9	85	115			
Arsenic	0.023	0.0010	0.02500	0	91.8	85	115			
Lead	0.012	0.00050	0.01250	0	94.6	85	115			
Selenium	0.023	0.0010	0.02500	0	92.6	85	115			
Thallium	0.012	0.00050	0.01250	0	92.6	85	115			
Uranium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A59102** RunNo: **59102**
Prep Date: Analysis Date: **4/11/2019** SeqNo: **1989425** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0013	0.0010	0.001000	0	132	50	150			
Arsenic	0.00097	0.0010	0.001000	0	97.2	50	150			J
Lead	0.00053	0.00050	0.0005000	0	107	50	150			
Selenium	0.0012	0.0010	0.001000	0	117	50	150			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59102**	RunNo: **59102**
Prep Date:	Analysis Date: **4/11/2019**	SeqNo: **1989425** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.00049	0.00050	0.0005000	0	98.3	50	150			J
Uranium	0.00058	0.00050	0.0005000	0	116	50	150			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59102**	RunNo: **59102**
Prep Date:	Analysis Date: **4/11/2019**	SeqNo: **1989428** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59102**	RunNo: **59102**
Prep Date:	Analysis Date: **4/11/2019**	SeqNo: **1989430** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	98.9	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.026	0.0010	0.02500	0	105	85	115			
Thallium	0.013	0.00050	0.01250	0	103	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59204**	RunNo: **59204**
Prep Date:	Analysis Date: **4/16/2019**	SeqNo: **1993417** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59204**	RunNo: **59204**
Prep Date:	Analysis Date: **4/16/2019**	SeqNo: **1993418** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00046	0.00050	0.0005000	0	92.4	50	150			J

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59204**	RunNo: **59204**
Prep Date:	Analysis Date: **4/16/2019**	SeqNo: **1993419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	98.3	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **MB-44281**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44281**	RunNo: **59086**
Prep Date: **4/10/2019**	Analysis Date: **4/11/2019**	SeqNo: **1988706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000069	0.00020								J

Sample ID: **LCS-44281**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44281**	RunNo: **59086**
Prep Date: **4/10/2019**	Analysis Date: **4/11/2019**	SeqNo: **1988707** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.0	80	120			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R58947**	RunNo: **58947**							
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1982376**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.047	0.50								J
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R58947**	RunNo: **58947**							
Prep Date:	Analysis Date: **4/5/2019**	SeqNo: **1982377**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.7	90	110			
Chloride	4.8	0.50	5.000	0	95.3	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.8	90	110			
Sulfate	9.8	0.50	10.00	0	98.1	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.2	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R59031**	RunNo: **59031**							
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987017**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R59031**	RunNo: **59031**							
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1987018**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	97.0	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R59038**	RunNo: **59038**							
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988170**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**

11-Jun-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R59038**	RunNo: **59038**							
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988170**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R59038**	RunNo: **59038**							
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988171**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Sample ID: **LCSd**	SampType: **LCSD**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS02**	Batch ID: **R59038**	RunNo: **59038**							
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988172**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	90	110	0.898	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**

11-Jun-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **MB-44035**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44035**	RunNo: **58868**
Prep Date: **4/3/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979017** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-44035**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44035**	RunNo: **58868**
Prep Date: **4/3/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979018** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	100	70	130			

Sample ID: **LCSD-44035**	SampType: **LCSD**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSS02**	Batch ID: **44035**	RunNo: **58868**
Prep Date: **4/3/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979019** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	113	70	130	12.2	20	

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **LCS-44015**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **44015**	RunNo: **58853**
Prep Date: **4/2/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	0	116	71.8	135			
Surr: DNOP	0.50		0.5000		100	70	130			

Sample ID: **MB-44015**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **44015**	RunNo: **58853**
Prep Date: **4/2/2019**	Analysis Date: **4/3/2019**	SeqNo: **1979448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		103	70	130			

Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R58893**	RunNo: **58893**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1982698** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	80.6	70	130			
Toluene	20	1.0	20.00	0	98.3	70	130			
Chlorobenzene	18	1.0	20.00	0	91.9	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	80.3	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	78.9	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.4	70	130			
Surr: Toluene-d8	9.6		10.00		96.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58893**	RunNo: **58893**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1982714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	0.27	1.0								J
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	0.42	3.0								J
2-Chlorotoluene	ND	1.0								

Qualifiers:

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58893**	RunNo: **58893**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1982714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R58893**	RunNo: **58893**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1982714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	8.4		10.00		83.6	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **mb-44061**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44061**	RunNo: **59191**
Prep Date: **4/3/2019**	Analysis Date: **4/16/2019**	SeqNo: **1992809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **mb-44061**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44061**	RunNo: **59191**
Prep Date: **4/3/2019**	Analysis Date: **4/16/2019**	SeqNo: **1992809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	80		200.0		40.1	15	101			
Surr: Phenol-d5	59		200.0		29.7	15	84.6			
Surr: 2,4,6-Tribromophenol	110		200.0		57.4	27.8	112			
Surr: Nitrobenzene-d5	55		100.0		55.0	33	113			
Surr: 2-Fluorobiphenyl	43		100.0		43.2	26.6	107			
Surr: 4-Terphenyl-d14	56		100.0		56.0	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **lcs-44061** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **44061** RunNo: **59191**
Prep Date: **4/3/2019** Analysis Date: **4/16/2019** SeqNo: **1992810** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	54	10	100.0	0	53.6	38.1	100			
4-Chloro-3-methylphenol	130	10	200.0	0	65.8	40.7	109			
2-Chlorophenol	100	10	200.0	0	51.8	38.1	99.9			
1,4-Dichlorobenzene	28	10	100.0	0	27.6	38	95.2			S
2,4-Dinitrotoluene	52	10	100.0	0	52.2	55.1	96.7			S
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.2	40.6	111			
4-Nitrophenol	63	10	200.0	0	31.4	15	85.9			
Pentachlorophenol	100	20	200.0	0	49.9	36.5	88.7			
Phenol	60	10	200.0	0	29.8	15	86.5			
Pyrene	67	10	100.0	0	67.2	54.1	97.8			
1,2,4-Trichlorobenzene	34	10	100.0	0	33.7	23.6	102			
Surr: 2-Fluorophenol	74		200.0		37.1	15	101			
Surr: Phenol-d5	59		200.0		29.4	15	84.6			
Surr: 2,4,6-Tribromophenol	140		200.0		67.7	27.8	112			
Surr: Nitrobenzene-d5	51		100.0		50.8	33	113			
Surr: 2-Fluorobiphenyl	44		100.0		43.5	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		63.4	18.7	148			

Sample ID: **1904008-004Cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-28** Batch ID: **44061** RunNo: **59191**
Prep Date: **4/3/2019** Analysis Date: **4/16/2019** SeqNo: **1992821** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	39	10	100.0	0	38.6	30	94			
4-Chloro-3-methylphenol	89	10	200.0	0	44.3	30.9	101			
2-Chlorophenol	82	10	200.0	0	41.2	15.8	96.2			
1,4-Dichlorobenzene	23	10	100.0	0	22.8	25.6	87.2			S
2,4-Dinitrotoluene	41	10	100.0	0	41.4	29.5	85.8			
N-Nitrosodi-n-propylamine	48	10	100.0	0	48.4	28.6	108			
4-Nitrophenol	57	10	200.0	0	28.5	15	59.7			
Pentachlorophenol	81	20	200.0	0	40.6	21.1	99.4			
Phenol	45	10	200.0	0	22.6	15	61.9			
Pyrene	44	10	100.0	0	44.3	37.5	105			
1,2,4-Trichlorobenzene	27	10	100.0	0	27.2	17.1	98.7			
Surr: 2-Fluorophenol	58		200.0		29.2	15	101			
Surr: Phenol-d5	46		200.0		22.8	15	84.6			
Surr: 2,4,6-Tribromophenol	94		200.0		47.1	27.8	112			
Surr: Nitrobenzene-d5	43		100.0		42.7	33	113			
Surr: 2-Fluorobiphenyl	35		100.0		34.6	26.6	107			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**

11-Jun-19

Client: MARATHON GALLUP

Project: 2019 1st QTR GW Sampling

Sample ID: **1904008-004Cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **MKTF-28** Batch ID: **44061** RunNo: **59191**

Prep Date: **4/3/2019** Analysis Date: **4/16/2019** SeqNo: **1992821** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	47		100.0		46.8	18.7	148			

Sample ID: **1904008-004Cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **MKTF-28** Batch ID: **44061** RunNo: **59191**

Prep Date: **4/3/2019** Analysis Date: **4/16/2019** SeqNo: **1992822** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	47	10	100.0	0	47.4	30	94	20.5	47.7	
4-Chloro-3-methylphenol	110	10	200.0	0	56.7	30.9	101	24.5	54.7	
2-Chlorophenol	100	10	200.0	0	50.4	15.8	96.2	20.1	40.9	
1,4-Dichlorobenzene	31	10	100.0	0	30.6	25.6	87.2	29.2	46.8	
2,4-Dinitrotoluene	47	10	100.0	0	47.3	29.5	85.8	13.3	49.8	
N-Nitrosodi-n-propylamine	60	10	100.0	0	59.8	28.6	108	21.2	45.2	
4-Nitrophenol	35	10	200.0	0	17.6	15	59.7	47.3	82.1	
Pentachlorophenol	75	20	200.0	0	37.4	21.1	99.4	8.31	52	
Phenol	59	10	200.0	0	29.6	15	61.9	27.2	61.9	
Pyrene	51	10	100.0	0	51.1	37.5	105	14.2	39.9	
1,2,4-Trichlorobenzene	33	10	100.0	0	33.4	17.1	98.7	20.4	47.5	
Surr: 2-Fluorophenol	150		200.0		75.2	15	101	0	0	
Surr: Phenol-d5	130		200.0		62.5	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	220		200.0		112	27.8	112	0	0	
Surr: Nitrobenzene-d5	110		100.0		105	33	113	0	0	
Surr: 2-Fluorobiphenyl	88		100.0		88.4	26.6	107	0	0	
Surr: 4-Terphenyl-d14	97		100.0		96.7	18.7	148	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **MB-R59461**	SampType: **MBLK**	TestCode: **EPA 335.4: Total Cyanide Subbed**
Client ID: **PBW**	Batch ID: **R59461**	RunNo: **59461**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **2003006** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide	ND	0.00500								

Sample ID: **LCS-R59461**	SampType: **LCS**	TestCode: **EPA 335.4: Total Cyanide Subbed**
Client ID: **LCSW**	Batch ID: **R59461**	RunNo: **59461**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **2003007** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide	0.109		0.1000	0	109	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904008**
11-Jun-19

Client: MARATHON GALLUP
Project: 2019 1st QTR GW Sampling

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **GA58893**	RunNo: **58893**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1982736** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.2	70	130			
Surr: BFB	10		10.00		102	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **GA58893**	RunNo: **58893**
Prep Date:	Analysis Date: **4/4/2019**	SeqNo: **1982737** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		100	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1904008** RcptNo: **1**

Received By: **Victoria Zellar** **3/28/2019 4:12:00 PM** Victoria Zellar

Completed By: **Leah Baca** **4/1/2019 9:31:52 AM** Leah S Baca

Reviewed By: LB 4/1/19

LB Thm 4-1-19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Approved by client.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☑ No ☑ Thm 4-1-19 NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 26 (1) (<2 or >12 unless noted)
Adjusted? Yes
Checked by: Thm 4-1-19

Special Handling (if applicable)

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

Person Notified: Cheryl Johnson Date 4/2/19
By Whom: Leah Baca Via: ☒ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: Missing sample bottles
Client Instructions: Analysis not needed for missing bottles

16. Additional remarks: Added 0.5ml HNO3 to 003F & 005F for 02. Held 24 HRS Thm 4-1-19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.8	Good	Yes			
2	5.9	Good	Yes			
3	6.4	Good	Yes			

Chain-of-Custody Record

Client:	MARATHON - Western Refining
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road, Gallup, NM 87301
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard X Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other ☐ EDD (Type)

Turn-Around Time:	X Standard Rush
Project Name:	2019 1ST QTR GW SAMPLING
Project #:	OAPIS, OW-30/58, MKTF
Project Manager:	BRIAN MOORE
Sampler:	CAJohnson1@marathonpetroleum.com
On Ice:	X Yes ☐ No
Sample Temperature:	3.0 C 5.8°C, 5.9°C, 6.4°C
HEAL No.	1904008

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Air Bubbles (Y or N)
3/28/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X	—	Did Not receive						
3/28/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X								
3/28/2019	750	AQUEOUS	OAPIS-1	MISC	MISC	-003	X	X	X	X	X	X		X	
3/28/2019	855	AQUEOUS	MKTF-28	MISC	MISC	-004	X	X	2	X	X	X	X	Did Not receive	
3/28/2019	924	AQUEOUS	MKTF-30	MISC	MISC	-005	X	X	X	X	X	X	X		
3/28/2019	0956	AQUEOUS	MKTF-29	MISC	MISC	-006	X	X	X	X	X	X	X		
3/28/2019	1015	AQUEOUS	DUPLICATE	MISC	MISC	-007	X	X	X	X	X	X	X		
3/28/2019	1119	AQUEOUS	OW-58	MISC	MISC	-008	X	X	X	X	X	X			
3/28/2019	1225	AQUEOUS	MKTF-2	MISC	MISC	-009	X	X	X	X	X	X	X		
3/28/2019	1250	AQUEOUS	MKTF-27	MISC	MISC	-010	X	X	X	X	X	X	X		
3/27/2019	1556	AQUEOUS	OW-30	MISC	MISC	-011	X	X	X	X	X	X	X	Did Not receive bottle for Anions or 8270	

AK 04/11/19

LB 4/1/19

Date:	Time:	Relinquished by:	Received by:	Date Time	Remarks:
3/28/19	1410			3/28/19 2:15 PM	
3/28/19	4:12 PM			3/29/19 1612	

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

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0818		0.00500	1	04/10/2019 10:02	WG1262613

Method Blank (MB)

(MB) R3400146-1 04/10/19 09:49

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1084680-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1084680-01 04/10/19 10:03 • (DUP) R3400146-3 04/10/19 10:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1084710-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1084710-03 04/10/19 10:16 • (DUP) R3400146-8 04/10/19 10:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3400146-2 04/10/19 09:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.109	109	85.0-115	

L1084680-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1084680-02 04/10/19 10:05 • (MS) R3400146-4 04/10/19 10:06 • (MSD) R3400146-5 04/10/19 10:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.102	0.0981	102	98.1	1	75.0-125			3.90	20

L1084710-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1084710-01 04/10/19 10:10 • (MS) R3400146-6 04/10/19 10:11 • (MSD) R3400146-7 04/10/19 10:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0955	0.0968	95.5	96.8	1	75.0-125			1.35	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 07, 2019

Brian Moore
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: Groundwater Sampling OrderNo.: 1904535

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/9/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-2
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:20:00 AM
Lab ID: 1904535-001
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.5	0.35	1.0		mg/L	1	4/12/2019 4:35:51 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 4:35:51 AM	44267
Surr: DNOP	84.7	0	70-130		%Rec	1	4/12/2019 4:35:51 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.3	0.021	0.050		mg/L	1	4/17/2019 8:51:28 AM	R59232
Surr: BFB	173	0	72.8-125	S	%Rec	1	4/17/2019 8:51:28 AM	R59232
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	2.1	0.25	0.50		mg/L	5	4/10/2019 1:11:47 PM	R59074
Chloride	140	10	10		mg/L	20	4/10/2019 1:24:39 PM	R59074
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	4/10/2019 1:11:47 PM	R59074
Bromide	0.74	0.068	0.50		mg/L	5	4/10/2019 1:11:47 PM	R59074
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	4/10/2019 1:11:47 PM	R59074
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	4/10/2019 1:11:47 PM	R59074
Sulfate	4.0	0.32	2.5		mg/L	5	4/10/2019 1:11:47 PM	R59074
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/15/2019 2:28:37 PM	C59158
Barium	2.1	0.0032	0.010	*	mg/L	5	4/15/2019 2:30:45 PM	C59158
Beryllium	ND	0.00028	0.0020		mg/L	1	4/15/2019 2:28:37 PM	C59158
Boron	0.64	0.0045	0.040		mg/L	1	4/15/2019 2:28:37 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 2:28:37 PM	C59158
Calcium	61	0.062	1.0		mg/L	1	4/15/2019 2:28:37 PM	C59158
Chromium	ND	0.0015	0.0060		mg/L	1	4/15/2019 2:28:37 PM	C59158
Cobalt	ND	0.0031	0.0060		mg/L	1	4/15/2019 2:28:37 PM	C59158
Copper	0.0014	0.0013	0.0060	J	mg/L	1	4/15/2019 2:28:37 PM	C59158
Iron	0.26	0.0087	0.020		mg/L	1	4/15/2019 2:28:37 PM	C59158
Magnesium	11	0.050	1.0		mg/L	1	4/15/2019 2:28:37 PM	C59158
Manganese	0.68	0.00029	0.0020	*	mg/L	1	4/15/2019 2:28:37 PM	C59158
Molybdenum	0.0087	0.0067	0.0080		mg/L	1	4/15/2019 2:28:37 PM	C59158
Nickel	0.013	0.0040	0.010		mg/L	1	4/15/2019 2:28:37 PM	C59158
Potassium	0.30	0.16	1.0	J	mg/L	1	4/15/2019 2:28:37 PM	C59158
Silver	0.0015	0.00094	0.0050	J	mg/L	1	4/15/2019 2:28:37 PM	C59158
Sodium	300	2.1	5.0		mg/L	5	4/15/2019 2:30:45 PM	C59158
Zinc	0.043	0.0023	0.010		mg/L	1	4/15/2019 2:28:37 PM	C59158
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	5.5	0.011	0.20	*	mg/L	10	4/23/2019 5:46:44 PM	44260
Barium	2.1	0.0049	0.020	*	mg/L	10	4/23/2019 5:46:44 PM	44260
Beryllium	0.00024	0.00022	0.0020	J	mg/L	1	4/22/2019 6:58:46 PM	44260

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-2
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:20:00 AM
Lab ID: 1904535-001
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Boron	0.56	0.018	0.40		mg/L	10	4/23/2019 5:46:44 PM	44260
Cadmium	ND	0.00074	0.0020		mg/L	1	4/22/2019 6:58:46 PM	44260
Chromium	0.0017	0.0012	0.0060	J	mg/L	1	4/22/2019 6:58:46 PM	44260
Cobalt	0.0014	0.0012	0.0060	J	mg/L	1	4/22/2019 6:58:46 PM	44260
Copper	0.0042	0.0041	0.0060	J	mg/L	1	4/22/2019 6:58:46 PM	44260
Iron	4.0	0.061	0.20	*	mg/L	10	4/23/2019 5:46:44 PM	44260
Manganese	0.65	0.00060	0.020	*	mg/L	10	4/23/2019 5:46:44 PM	44260
Molybdenum	0.0051	0.0021	0.0080	J	mg/L	1	4/22/2019 6:58:46 PM	44260
Nickel	0.015	0.0015	0.010		mg/L	1	4/22/2019 6:58:46 PM	44260
Silver	ND	0.0014	0.0050		mg/L	1	4/22/2019 6:58:46 PM	44260
Zinc	0.019	0.0058	0.010		mg/L	1	4/22/2019 6:58:46 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/22/2019 7:16:58 PM	C59357
Arsenic	0.0030	0.00010	0.0010		mg/L	1	4/22/2019 7:16:58 PM	C59357
Lead	0.00012	0.000055	0.00050	J	mg/L	1	4/22/2019 7:16:58 PM	C59357
Selenium	0.00024	0.00017	0.0010	J	mg/L	1	4/22/2019 7:16:58 PM	C59357
Thallium	ND	0.000048	0.00050		mg/L	1	4/22/2019 7:16:58 PM	C59357
Uranium	0.00081	0.000075	0.00050		mg/L	1	4/22/2019 7:16:58 PM	C59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/17/2019 7:04:57 PM	44260
Arsenic	0.0046	0.00031	0.0010		mg/L	1	4/17/2019 7:04:57 PM	44260
Lead	0.0033	0.000026	0.00050		mg/L	1	4/17/2019 7:04:57 PM	44260
Selenium	0.00049	0.00048	0.0010	J	mg/L	1	4/23/2019 3:41:48 PM	44260
Thallium	0.000096	0.000052	0.00050	J	mg/L	1	4/17/2019 7:04:57 PM	44260
Uranium	0.00091	0.000085	0.00050		mg/L	1	4/17/2019 7:04:57 PM	44260
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Acenaphthylene	ND	6.2	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Aniline	ND	6.2	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Anthracene	ND	5.7	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Azobenzene	ND	6.7	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Benzoic acid	6.5	6.3	20	J	µg/L	1	4/17/2019 3:24:01 PM	44353
Benzyl alcohol	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-2
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:20:00 AM
Lab ID: 1904535-001
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/17/2019 3:24:01 PM	44353
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Carbazole	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/17/2019 3:24:01 PM	44353
4-Chloroaniline	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2-Chlorophenol	ND	5.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Chrysene	ND	6.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Dibenzofuran	ND	6.9	10		µg/L	1	4/17/2019 3:24:01 PM	44353
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Diethyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/17/2019 3:24:01 PM	44353
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/17/2019 3:24:01 PM	44353
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/17/2019 3:24:01 PM	44353
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/17/2019 3:24:01 PM	44353
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Fluoranthene	ND	5.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Fluorene	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Hexachloroethane	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Isophorone	ND	6.2	10		µg/L	1	4/17/2019 3:24:01 PM	44353
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-2
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:20:00 AM
Lab ID: 1904535-001
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	4/17/2019 3:24:01 PM	44353
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/17/2019 3:24:01 PM	44353
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/17/2019 3:24:01 PM	44353
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/17/2019 3:24:01 PM	44353
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Naphthalene	ND	5.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2-Nitroaniline	ND	5.9	10		µg/L	1	4/17/2019 3:24:01 PM	44353
3-Nitroaniline	ND	6.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
4-Nitroaniline	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Nitrobenzene	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2-Nitrophenol	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
4-Nitrophenol	ND	5.6	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Pentachlorophenol	ND	5.3	20		µg/L	1	4/17/2019 3:24:01 PM	44353
Phenanthrene	ND	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Phenol	29	6.0	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Pyrene	ND	6.5	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Pyridine	ND	5.4	10		µg/L	1	4/17/2019 3:24:01 PM	44353
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/17/2019 3:24:01 PM	44353
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/17/2019 3:24:01 PM	44353
Surr: 2-Fluorophenol	42.5	0	15-101		%Rec	1	4/17/2019 3:24:01 PM	44353
Surr: Phenol-d5	33.1	0	15-84.6		%Rec	1	4/17/2019 3:24:01 PM	44353
Surr: 2,4,6-Tribromophenol	67.2	0	27.8-112		%Rec	1	4/17/2019 3:24:01 PM	44353
Surr: Nitrobenzene-d5	58.5	0	33-113		%Rec	1	4/17/2019 3:24:01 PM	44353
Surr: 2-Fluorobiphenyl	44.8	0	26.6-107		%Rec	1	4/17/2019 3:24:01 PM	44353
Surr: 4-Terphenyl-d14	61.9	0	18.7-148		%Rec	1	4/17/2019 3:24:01 PM	44353
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	340	1.7	5.0		µg/L	10	4/17/2019 6:02:18 PM	R59248
Toluene	ND	0.35	1.0		µg/L	1	4/17/2019 6:30:52 PM	R59248
Ethylbenzene	24	0.13	1.0		µg/L	1	4/17/2019 6:30:52 PM	R59248
Methyl tert-butyl ether (MTBE)	97	0.46	1.0		µg/L	1	4/17/2019 6:30:52 PM	R59248
Xylenes, Total	1.0	0.45	1.5	J	µg/L	1	4/17/2019 6:30:52 PM	R59248
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	4/17/2019 6:30:52 PM	R59248
Surr: 4-Bromofluorobenzene	97.5	0	70-130		%Rec	1	4/17/2019 6:30:52 PM	R59248
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	4/17/2019 6:30:52 PM	R59248
Surr: Toluene-d8	98.8	0	70-130		%Rec	1	4/17/2019 6:30:52 PM	R59248

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: KA-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:45:00 AM
Lab ID: 1904535-002
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.53	0.35	1.0	J	mg/L	1	4/12/2019 5:41:12 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 5:41:12 AM	44267
Surr: DNOP	100	0	70-130		%Rec	1	4/12/2019 5:41:12 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.65	0.021	0.050		mg/L	1	4/17/2019 9:14:18 AM	R59232
Surr: BFB	147	0	72.8-125	S	%Rec	1	4/17/2019 9:14:18 AM	R59232
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.88	0.25	0.50		mg/L	5	4/10/2019 1:37:31 PM	R59074
Chloride	210	10	10		mg/L	20	4/10/2019 1:50:23 PM	R59074
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	4/10/2019 1:37:31 PM	R59074
Bromide	1.6	0.068	0.50		mg/L	5	4/10/2019 1:37:31 PM	R59074
Nitrogen, Nitrate (As N)	ND	0.14	0.50		mg/L	5	4/10/2019 1:37:31 PM	R59074
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	4/10/2019 1:37:31 PM	R59074
Sulfate	15	0.32	2.5		mg/L	5	4/10/2019 1:37:31 PM	R59074
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/15/2019 2:37:40 PM	C59158
Barium	1.5	0.0032	0.010		mg/L	5	4/15/2019 2:39:49 PM	C59158
Beryllium	ND	0.00028	0.0020		mg/L	1	4/15/2019 2:37:40 PM	C59158
Boron	0.65	0.0045	0.040		mg/L	1	4/15/2019 2:37:40 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 2:37:40 PM	C59158
Calcium	100	0.31	5.0		mg/L	5	4/15/2019 2:39:49 PM	C59158
Chromium	ND	0.0015	0.0060		mg/L	1	4/15/2019 2:37:40 PM	C59158
Cobalt	ND	0.0031	0.0060		mg/L	1	4/15/2019 2:37:40 PM	C59158
Copper	0.0038	0.0013	0.0060	J	mg/L	1	4/15/2019 2:37:40 PM	C59158
Iron	0.12	0.0087	0.020		mg/L	1	4/15/2019 2:37:40 PM	C59158
Magnesium	18	0.050	1.0		mg/L	1	4/15/2019 2:37:40 PM	C59158
Manganese	1.5	0.0014	0.010	*	mg/L	5	4/15/2019 2:39:49 PM	C59158
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/15/2019 2:37:40 PM	C59158
Nickel	0.030	0.0040	0.010		mg/L	1	4/15/2019 2:37:40 PM	C59158
Potassium	0.50	0.16	1.0	J	mg/L	1	4/15/2019 2:37:40 PM	C59158
Silver	0.0026	0.00094	0.0050	J	mg/L	1	4/15/2019 2:37:40 PM	C59158
Sodium	370	2.1	5.0		mg/L	5	4/15/2019 2:39:49 PM	C59158
Zinc	0.050	0.0023	0.010		mg/L	1	4/15/2019 2:37:40 PM	C59158
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	0.10	0.0011	0.020		mg/L	1	4/23/2019 5:48:54 PM	44260
Barium	1.4	0.0024	0.010		mg/L	5	4/23/2019 5:50:54 PM	44260
Beryllium	ND	0.00022	0.0020		mg/L	1	4/23/2019 5:48:54 PM	44260

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: KA-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:45:00 AM
Lab ID: 1904535-002
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Boron	0.60	0.0018	0.040		mg/L	1	4/23/2019 5:48:54 PM	44260
Cadmium	ND	0.00074	0.0020		mg/L	1	4/23/2019 5:48:54 PM	44260
Chromium	ND	0.0012	0.0060		mg/L	1	4/23/2019 5:48:54 PM	44260
Cobalt	ND	0.0012	0.0060		mg/L	1	4/23/2019 5:48:54 PM	44260
Copper	ND	0.0041	0.0060		mg/L	1	4/23/2019 5:48:54 PM	44260
Iron	1.6	0.030	0.10	*	mg/L	5	4/23/2019 5:50:54 PM	44260
Manganese	1.4	0.00030	0.010	*	mg/L	5	4/23/2019 5:50:54 PM	44260
Molybdenum	0.0034	0.0021	0.0080	J	mg/L	1	4/23/2019 5:48:54 PM	44260
Nickel	0.023	0.0015	0.010		mg/L	1	4/23/2019 5:48:54 PM	44260
Silver	0.0018	0.0014	0.0050	J	mg/L	1	4/23/2019 5:48:54 PM	44260
Zinc	0.0060	0.0058	0.010	J	mg/L	1	4/23/2019 5:48:54 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/22/2019 7:27:29 PM	C59357
Arsenic	0.0033	0.00010	0.0010		mg/L	1	4/22/2019 7:27:29 PM	C59357
Lead	0.000094	0.000055	0.00050	J	mg/L	1	4/22/2019 7:27:29 PM	C59357
Selenium	0.00029	0.00017	0.0010	J	mg/L	1	4/22/2019 7:27:29 PM	C59357
Thallium	ND	0.000048	0.00050		mg/L	1	4/22/2019 7:27:29 PM	C59357
Uranium	0.0093	0.000075	0.00050		mg/L	1	4/22/2019 7:27:29 PM	C59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/17/2019 7:07:05 PM	44260
Arsenic	0.0056	0.00031	0.0010		mg/L	1	4/17/2019 7:07:05 PM	44260
Lead	0.00070	0.000026	0.00050		mg/L	1	4/17/2019 7:07:05 PM	44260
Selenium	ND	0.00048	0.0010		mg/L	1	4/23/2019 3:43:55 PM	44260
Thallium	ND	0.000052	0.00050		mg/L	1	4/17/2019 7:07:05 PM	44260
Uranium	0.0093	0.000085	0.00050		mg/L	1	4/17/2019 7:07:05 PM	44260
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Acenaphthylene	ND	6.2	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Aniline	ND	6.2	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Anthracene	ND	5.7	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Azobenzene	ND	6.7	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Benzoic acid	11	6.3	20	J	µg/L	1	4/17/2019 3:53:22 PM	44353
Benzyl alcohol	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: KA-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:45:00 AM
Lab ID: 1904535-002
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/17/2019 3:53:22 PM	44353
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Carbazole	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/17/2019 3:53:22 PM	44353
4-Chloroaniline	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2-Chlorophenol	ND	5.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Chrysene	ND	6.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Dibenzofuran	ND	6.9	10		µg/L	1	4/17/2019 3:53:22 PM	44353
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Diethyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/17/2019 3:53:22 PM	44353
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/17/2019 3:53:22 PM	44353
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/17/2019 3:53:22 PM	44353
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/17/2019 3:53:22 PM	44353
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Fluoranthene	ND	5.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Fluorene	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Hexachloroethane	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Isophorone	ND	6.2	10		µg/L	1	4/17/2019 3:53:22 PM	44353
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: KA-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 9:45:00 AM
Lab ID: 1904535-002
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	4/17/2019 3:53:22 PM	44353
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/17/2019 3:53:22 PM	44353
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/17/2019 3:53:22 PM	44353
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/17/2019 3:53:22 PM	44353
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Naphthalene	ND	5.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2-Nitroaniline	ND	5.9	10		µg/L	1	4/17/2019 3:53:22 PM	44353
3-Nitroaniline	ND	6.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
4-Nitroaniline	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Nitrobenzene	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2-Nitrophenol	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
4-Nitrophenol	ND	5.6	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Pentachlorophenol	ND	5.3	20		µg/L	1	4/17/2019 3:53:22 PM	44353
Phenanthrene	ND	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Phenol	11	6.0	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Pyrene	ND	6.5	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Pyridine	ND	5.4	10		µg/L	1	4/17/2019 3:53:22 PM	44353
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/17/2019 3:53:22 PM	44353
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/17/2019 3:53:22 PM	44353
Surr: 2-Fluorophenol	47.6	0	15-101		%Rec	1	4/17/2019 3:53:22 PM	44353
Surr: Phenol-d5	37.5	0	15-84.6		%Rec	1	4/17/2019 3:53:22 PM	44353
Surr: 2,4,6-Tribromophenol	66.9	0	27.8-112		%Rec	1	4/17/2019 3:53:22 PM	44353
Surr: Nitrobenzene-d5	65.9	0	33-113		%Rec	1	4/17/2019 3:53:22 PM	44353
Surr: 2-Fluorobiphenyl	52.9	0	26.6-107		%Rec	1	4/17/2019 3:53:22 PM	44353
Surr: 4-Terphenyl-d14	61.9	0	18.7-148		%Rec	1	4/17/2019 3:53:22 PM	44353
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	210	1.7	10		µg/L	10	4/17/2019 7:56:37 PM	R59248
Toluene	ND	0.35	1.0		µg/L	1	4/17/2019 8:25:14 PM	R59248
Ethylbenzene	28	0.13	1.0		µg/L	1	4/17/2019 8:25:14 PM	R59248
Methyl tert-butyl ether (MTBE)	61	0.46	1.0		µg/L	1	4/17/2019 8:25:14 PM	R59248
Xylenes, Total	1.2	0.45	1.5	J	µg/L	1	4/17/2019 8:25:14 PM	R59248
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	4/17/2019 8:25:14 PM	R59248
Surr: 4-Bromofluorobenzene	99.2	0	70-130		%Rec	1	4/17/2019 8:25:14 PM	R59248
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	4/17/2019 8:25:14 PM	R59248
Surr: Toluene-d8	98.9	0	70-130		%Rec	1	4/17/2019 8:25:14 PM	R59248

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:15:00 AM
Lab ID: 1904535-003
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/11/2019 7:57:22 PM	44280
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/12/2019 6:02:50 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 6:02:50 AM	44267
Surr: DNOP	100	0	70-130		%Rec	1	4/12/2019 6:02:50 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.067	0.021	0.050		mg/L	1	4/17/2019 9:37:04 AM	R59232
Surr: BFB	105	0	72.8-125		%Rec	1	4/17/2019 9:37:04 AM	R59232
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.65	0.25	0.50		mg/L	5	4/10/2019 2:03:15 PM	R59074
Chloride	390	10	10		mg/L	20	4/10/2019 2:16:06 PM	R59074
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	4/10/2019 2:03:15 PM	R59074
Bromide	2.4	0.068	0.50		mg/L	5	4/10/2019 2:03:15 PM	R59074
Nitrogen, Nitrate (As N)	5.8	0.14	0.50		mg/L	5	4/10/2019 2:03:15 PM	R59074
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	4/10/2019 2:03:15 PM	R59074
Sulfate	170	0.32	2.5		mg/L	5	4/10/2019 2:03:15 PM	R59074
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/15/2019 2:50:36 PM	C59158
Barium	0.12	0.00065	0.0020		mg/L	1	4/15/2019 2:50:36 PM	C59158
Beryllium	ND	0.00028	0.0020		mg/L	1	4/15/2019 2:50:36 PM	C59158
Boron	1.6	0.023	0.20		mg/L	5	4/15/2019 2:52:39 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 2:50:36 PM	C59158
Calcium	24	0.062	1.0		mg/L	1	4/15/2019 2:50:36 PM	C59158
Chromium	ND	0.0015	0.0060		mg/L	1	4/15/2019 2:50:36 PM	C59158
Cobalt	ND	0.0031	0.0060		mg/L	1	4/15/2019 2:50:36 PM	C59158
Copper	0.0050	0.0013	0.0060	J	mg/L	1	4/15/2019 2:50:36 PM	C59158
Iron	0.015	0.0087	0.020	J	mg/L	1	4/15/2019 2:50:36 PM	C59158
Magnesium	4.2	0.050	1.0		mg/L	1	4/15/2019 2:50:36 PM	C59158
Manganese	0.17	0.00029	0.0020	*	mg/L	1	4/15/2019 2:50:36 PM	C59158
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/15/2019 2:50:36 PM	C59158
Nickel	0.017	0.0040	0.010		mg/L	1	4/15/2019 2:50:36 PM	C59158
Potassium	2.1	0.16	1.0		mg/L	1	4/15/2019 2:50:36 PM	C59158
Silver	ND	0.00094	0.0050		mg/L	1	4/15/2019 2:50:36 PM	C59158
Sodium	590	4.2	10		mg/L	10	4/15/2019 2:54:34 PM	C59158
Zinc	0.034	0.0023	0.010		mg/L	1	4/17/2019 9:08:29 AM	A59216
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	0.26	0.0011	0.020	*	mg/L	1	4/23/2019 5:53:08 PM	44260

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:15:00 AM
Lab ID: 1904535-003
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Barium	0.12	0.00049	0.0020		mg/L	1	4/23/2019 5:53:08 PM	44260
Beryllium	ND	0.00022	0.0020		mg/L	1	4/23/2019 5:53:08 PM	44260
Boron	1.6	0.0091	0.20		mg/L	5	4/23/2019 5:55:17 PM	44260
Cadmium	ND	0.00074	0.0020		mg/L	1	4/23/2019 5:53:08 PM	44260
Chromium	ND	0.0012	0.0060		mg/L	1	4/23/2019 5:53:08 PM	44260
Cobalt	ND	0.0012	0.0060		mg/L	1	4/23/2019 5:53:08 PM	44260
Copper	0.0047	0.0041	0.0060	J	mg/L	1	4/23/2019 5:53:08 PM	44260
Iron	0.19	0.0061	0.020		mg/L	1	4/23/2019 5:53:08 PM	44260
Manganese	0.21	0.000060	0.0020	*	mg/L	1	4/23/2019 5:53:08 PM	44260
Molybdenum	0.0040	0.0021	0.0080	J	mg/L	1	4/23/2019 5:53:08 PM	44260
Nickel	0.018	0.0015	0.010		mg/L	1	4/23/2019 5:53:08 PM	44260
Silver	ND	0.0014	0.0050		mg/L	1	4/23/2019 5:53:08 PM	44260
Zinc	0.0098	0.0058	0.010	J	mg/L	1	4/23/2019 5:53:08 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/22/2019 7:40:35 PM	D59357
Arsenic	0.0011	0.00010	0.0010		mg/L	1	4/22/2019 7:40:35 PM	D59357
Lead	0.00021	0.000055	0.00050	J	mg/L	1	4/22/2019 7:40:35 PM	D59357
Selenium	0.0033	0.00017	0.0010		mg/L	1	4/22/2019 7:40:35 PM	D59357
Thallium	0.000050	0.000048	0.00050	J	mg/L	1	4/22/2019 7:40:35 PM	D59357
Uranium	0.022	0.000075	0.00050		mg/L	1	4/22/2019 7:40:35 PM	D59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	0.00016	0.00016	0.0010	J	mg/L	1	4/17/2019 7:17:43 PM	44260
Arsenic	0.0013	0.00031	0.0010		mg/L	1	4/17/2019 7:17:43 PM	44260
Lead	0.00045	0.000026	0.00050	J	mg/L	1	4/17/2019 7:17:43 PM	44260
Selenium	0.0045	0.00048	0.0010		mg/L	1	4/23/2019 3:50:17 PM	44260
Thallium	ND	0.000052	0.00050		mg/L	1	4/17/2019 7:17:43 PM	44260
Uranium	0.023	0.000085	0.00050		mg/L	1	4/17/2019 7:17:43 PM	44260
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Acenaphthylene	ND	6.2	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Aniline	ND	6.2	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Anthracene	ND	5.7	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Azobenzene	ND	6.7	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/17/2019 4:22:36 PM	44353

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:15:00 AM
Lab ID: 1904535-003
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	6.3	20		µg/L	1	4/17/2019 4:22:36 PM	44353
Benzyl alcohol	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/17/2019 4:22:36 PM	44353
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Carbazole	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/17/2019 4:22:36 PM	44353
4-Chloroaniline	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2-Chlorophenol	ND	5.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Chrysene	ND	6.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Dibenzofuran	ND	6.9	10		µg/L	1	4/17/2019 4:22:36 PM	44353
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Diethyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/17/2019 4:22:36 PM	44353
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/17/2019 4:22:36 PM	44353
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/17/2019 4:22:36 PM	44353
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/17/2019 4:22:36 PM	44353
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Fluoranthene	ND	5.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Fluorene	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Hexachloroethane	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Isophorone	ND	6.2	10		µg/L	1	4/17/2019 4:22:36 PM	44353

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: NAPIS-3
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:15:00 AM
Lab ID: 1904535-003
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2-Methylphenol	ND	6.3	10		µg/L	1	4/17/2019 4:22:36 PM	44353
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/17/2019 4:22:36 PM	44353
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/17/2019 4:22:36 PM	44353
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/17/2019 4:22:36 PM	44353
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Naphthalene	ND	5.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2-Nitroaniline	ND	5.9	10		µg/L	1	4/17/2019 4:22:36 PM	44353
3-Nitroaniline	ND	6.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
4-Nitroaniline	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Nitrobenzene	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2-Nitrophenol	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
4-Nitrophenol	ND	5.6	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Pentachlorophenol	ND	5.3	20		µg/L	1	4/17/2019 4:22:36 PM	44353
Phenanthrene	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Phenol	ND	6.0	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Pyrene	ND	6.5	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Pyridine	ND	5.4	10		µg/L	1	4/17/2019 4:22:36 PM	44353
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/17/2019 4:22:36 PM	44353
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/17/2019 4:22:36 PM	44353
Surr: 2-Fluorophenol	45.3	0	15-101		%Rec	1	4/17/2019 4:22:36 PM	44353
Surr: Phenol-d5	34.9	0	15-84.6		%Rec	1	4/17/2019 4:22:36 PM	44353
Surr: 2,4,6-Tribromophenol	69.5	0	27.8-112		%Rec	1	4/17/2019 4:22:36 PM	44353
Surr: Nitrobenzene-d5	63.3	0	33-113		%Rec	1	4/17/2019 4:22:36 PM	44353
Surr: 2-Fluorobiphenyl	50.1	0	26.6-107		%Rec	1	4/17/2019 4:22:36 PM	44353
Surr: 4-Terphenyl-d14	67.1	0	18.7-148		%Rec	1	4/17/2019 4:22:36 PM	44353
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/17/2019 8:53:51 PM	R5924
Toluene	ND	0.35	1.0		µg/L	1	4/17/2019 8:53:51 PM	R5924
Ethylbenzene	0.76	0.13	1.0	J	µg/L	1	4/17/2019 8:53:51 PM	R5924
Methyl tert-butyl ether (MTBE)	40	0.46	1.0		µg/L	1	4/17/2019 8:53:51 PM	R5924
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/17/2019 8:53:51 PM	R5924
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	4/17/2019 8:53:51 PM	R5924
Surr: 4-Bromofluorobenzene	99.7	0	70-130		%Rec	1	4/17/2019 8:53:51 PM	R5924
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	4/17/2019 8:53:51 PM	R5924
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	4/17/2019 8:53:51 PM	R5924

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:40:00 AM
Lab ID: 1904535-004
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/12/2019 6:24:33 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 6:24:33 AM	44267
Surr: DNOP	96.7	0	70-130		%Rec	1	4/12/2019 6:24:33 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	4/17/2019 11:07:52 AM	R59232
Surr: BFB	85.8	0	72.8-125		%Rec	1	4/17/2019 11:07:52 AM	R59232
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.050	0.10		mg/L	1	4/10/2019 2:28:58 PM	R59074
Chloride	ND	0.50	0.50		mg/L	1	4/10/2019 2:28:58 PM	R59074
Nitrogen, Nitrite (As N)	ND	0.070	0.10		mg/L	1	4/10/2019 2:28:58 PM	R59074
Bromide	ND	0.014	0.10		mg/L	1	4/10/2019 2:28:58 PM	R59074
Nitrogen, Nitrate (As N)	ND	0.029	0.10		mg/L	1	4/10/2019 2:28:58 PM	R59074
Phosphorus, Orthophosphate (As P)	ND	0.026	0.50		mg/L	1	4/10/2019 2:28:58 PM	R59074
Sulfate	ND	0.064	0.50		mg/L	1	4/10/2019 2:28:58 PM	R59074
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/15/2019 2:56:53 PM	C59158
Barium	ND	0.00065	0.0020		mg/L	1	4/15/2019 2:56:53 PM	C59158
Beryllium	ND	0.00028	0.0020		mg/L	1	4/15/2019 2:56:53 PM	C59158
Boron	0.0058	0.0045	0.040	J	mg/L	1	4/15/2019 2:56:53 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 2:56:53 PM	C59158
Calcium	ND	0.062	1.0		mg/L	1	4/15/2019 2:56:53 PM	C59158
Chromium	ND	0.0015	0.0060		mg/L	1	4/15/2019 2:56:53 PM	C59158
Cobalt	ND	0.0031	0.0060		mg/L	1	4/15/2019 2:56:53 PM	C59158
Copper	0.0015	0.0013	0.0060	J	mg/L	1	4/15/2019 2:56:53 PM	C59158
Iron	ND	0.0087	0.020		mg/L	1	4/15/2019 2:56:53 PM	C59158
Magnesium	ND	0.050	1.0		mg/L	1	4/15/2019 2:56:53 PM	C59158
Manganese	ND	0.00029	0.0020		mg/L	1	4/15/2019 2:56:53 PM	C59158
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/15/2019 2:56:53 PM	C59158
Nickel	ND	0.0040	0.010		mg/L	1	4/15/2019 2:56:53 PM	C59158
Potassium	ND	0.16	1.0		mg/L	1	4/15/2019 2:56:53 PM	C59158
Silver	ND	0.00094	0.0050		mg/L	1	4/15/2019 2:56:53 PM	C59158
Sodium	ND	0.42	1.0		mg/L	1	4/15/2019 2:56:53 PM	C59158
Zinc	0.021	0.0023	0.010		mg/L	1	4/17/2019 9:10:39 AM	A59216
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	0.0048	0.0011	0.020	J	mg/L	1	4/23/2019 5:57:22 PM	44260
Barium	ND	0.00049	0.0020		mg/L	1	4/23/2019 5:57:22 PM	44260
Beryllium	ND	0.00022	0.0020		mg/L	1	4/23/2019 5:57:22 PM	44260

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:40:00 AM
Lab ID: 1904535-004
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Boron	0.0055	0.0018	0.040	J	mg/L	1	4/23/2019 5:57:22 PM	44260
Cadmium	ND	0.00074	0.0020		mg/L	1	4/23/2019 5:57:22 PM	44260
Chromium	ND	0.0012	0.0060		mg/L	1	4/23/2019 5:57:22 PM	44260
Cobalt	ND	0.0012	0.0060		mg/L	1	4/23/2019 5:57:22 PM	44260
Copper	ND	0.0041	0.0060		mg/L	1	4/23/2019 5:57:22 PM	44260
Iron	0.014	0.0061	0.020	J	mg/L	1	4/23/2019 5:57:22 PM	44260
Manganese	0.00081	0.000060	0.0020	J	mg/L	1	4/23/2019 5:57:22 PM	44260
Molybdenum	ND	0.0021	0.0080		mg/L	1	4/23/2019 5:57:22 PM	44260
Nickel	ND	0.0015	0.010		mg/L	1	4/23/2019 5:57:22 PM	44260
Silver	ND	0.0014	0.0050		mg/L	1	4/23/2019 5:57:22 PM	44260
Zinc	ND	0.0058	0.010		mg/L	1	4/23/2019 5:57:22 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/22/2019 7:45:52 PM	D59357
Arsenic	ND	0.00010	0.0010		mg/L	1	4/22/2019 7:45:52 PM	D59357
Lead	ND	0.000055	0.00050		mg/L	1	4/22/2019 7:45:52 PM	D59357
Selenium	ND	0.00017	0.0010		mg/L	1	4/22/2019 7:45:52 PM	D59357
Thallium	ND	0.000048	0.00050		mg/L	1	4/22/2019 7:45:52 PM	D59357
Uranium	ND	0.000075	0.00050		mg/L	1	4/22/2019 7:45:52 PM	D59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/17/2019 7:19:50 PM	44260
Arsenic	ND	0.00031	0.0010		mg/L	1	4/17/2019 7:19:50 PM	44260
Lead	ND	0.000026	0.00050		mg/L	1	4/17/2019 7:19:50 PM	44260
Selenium	ND	0.00048	0.0010		mg/L	1	4/23/2019 3:52:24 PM	44260
Thallium	ND	0.000052	0.00050		mg/L	1	4/17/2019 7:19:50 PM	44260
Uranium	ND	0.000085	0.00050		mg/L	1	4/17/2019 7:19:50 PM	44260
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Acenaphthylene	ND	6.2	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Aniline	ND	6.2	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Anthracene	ND	5.7	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Azobenzene	ND	6.7	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Benzoic acid	11	6.3	20	J	µg/L	1	4/17/2019 4:52:01 PM	44353
Benzyl alcohol	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:40:00 AM
Lab ID: 1904535-004
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/17/2019 4:52:01 PM	44353
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Carbazole	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/17/2019 4:52:01 PM	44353
4-Chloroaniline	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2-Chlorophenol	ND	5.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Chrysene	ND	6.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Dibenzofuran	ND	6.9	10		µg/L	1	4/17/2019 4:52:01 PM	44353
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Diethyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/17/2019 4:52:01 PM	44353
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/17/2019 4:52:01 PM	44353
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/17/2019 4:52:01 PM	44353
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/17/2019 4:52:01 PM	44353
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Fluoranthene	ND	5.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Fluorene	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Hexachloroethane	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Isophorone	ND	6.2	10		µg/L	1	4/17/2019 4:52:01 PM	44353
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 10:40:00 AM
Lab ID: 1904535-004
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	4/17/2019 4:52:01 PM	44353
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/17/2019 4:52:01 PM	44353
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/17/2019 4:52:01 PM	44353
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/17/2019 4:52:01 PM	44353
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Naphthalene	ND	5.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2-Nitroaniline	ND	5.9	10		µg/L	1	4/17/2019 4:52:01 PM	44353
3-Nitroaniline	ND	6.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
4-Nitroaniline	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Nitrobenzene	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2-Nitrophenol	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
4-Nitrophenol	ND	5.6	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Pentachlorophenol	ND	5.3	20		µg/L	1	4/17/2019 4:52:01 PM	44353
Phenanthrene	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Phenol	ND	6.0	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Pyrene	ND	6.5	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Pyridine	ND	5.4	10		µg/L	1	4/17/2019 4:52:01 PM	44353
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/17/2019 4:52:01 PM	44353
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/17/2019 4:52:01 PM	44353
Surr: 2-Fluorophenol	42.5	0	15-101		%Rec	1	4/17/2019 4:52:01 PM	44353
Surr: Phenol-d5	32.0	0	15-84.6		%Rec	1	4/17/2019 4:52:01 PM	44353
Surr: 2,4,6-Tribromophenol	63.2	0	27.8-112		%Rec	1	4/17/2019 4:52:01 PM	44353
Surr: Nitrobenzene-d5	60.9	0	33-113		%Rec	1	4/17/2019 4:52:01 PM	44353
Surr: 2-Fluorobiphenyl	47.8	0	26.6-107		%Rec	1	4/17/2019 4:52:01 PM	44353
Surr: 4-Terphenyl-d14	62.6	0	18.7-148		%Rec	1	4/17/2019 4:52:01 PM	44353
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	0.21	0.17	1.0	J	µg/L	1	4/17/2019 9:22:25 PM	R59248
Toluene	1.1	0.35	1.0		µg/L	1	4/17/2019 9:22:25 PM	R59248
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/17/2019 9:22:25 PM	R59248
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/17/2019 9:22:25 PM	R59248
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/17/2019 9:22:25 PM	R59248
Surr: 1,2-Dichloroethane-d4	99.6	0	70-130		%Rec	1	4/17/2019 9:22:25 PM	R59248
Surr: 4-Bromofluorobenzene	95.1	0	70-130		%Rec	1	4/17/2019 9:22:25 PM	R59248
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	4/17/2019 9:22:25 PM	R59248
Surr: Toluene-d8	101	0	70-130		%Rec	1	4/17/2019 9:22:25 PM	R59248

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: FB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 11:00:00 AM
Lab ID: 1904535-005
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/12/2019 6:46:25 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 6:46:25 AM	44267
Surr: DNOP	93.7	0	70-130		%Rec	1	4/12/2019 6:46:25 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	4/17/2019 1:47:30 PM	R59232
Surr: BFB	86.6	0	72.8-125		%Rec	1	4/17/2019 1:47:30 PM	R59232
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.050	0.10		mg/L	1	4/10/2019 3:20:25 PM	R59074
Chloride	ND	0.50	0.50		mg/L	1	4/10/2019 3:20:25 PM	R59074
Nitrogen, Nitrite (As N)	ND	0.070	0.10		mg/L	1	4/10/2019 3:20:25 PM	R59074
Bromide	ND	0.014	0.10		mg/L	1	4/10/2019 3:20:25 PM	R59074
Nitrogen, Nitrate (As N)	ND	0.029	0.10		mg/L	1	4/10/2019 3:20:25 PM	R59074
Phosphorus, Orthophosphate (As P)	ND	0.026	0.50		mg/L	1	4/10/2019 3:20:25 PM	R59074
Sulfate	ND	0.064	0.50		mg/L	1	4/10/2019 3:20:25 PM	R59074
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/15/2019 3:04:03 PM	C59158
Barium	0.00098	0.00065	0.0020	J	mg/L	1	4/15/2019 3:04:03 PM	C59158
Beryllium	ND	0.00028	0.0020		mg/L	1	4/15/2019 3:04:03 PM	C59158
Boron	0.0048	0.0045	0.040	J	mg/L	1	4/15/2019 3:04:03 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 3:04:03 PM	C59158
Calcium	0.090	0.062	1.0	J	mg/L	1	4/15/2019 3:04:03 PM	C59158
Chromium	ND	0.0015	0.0060		mg/L	1	4/15/2019 3:04:03 PM	C59158
Cobalt	ND	0.0031	0.0060		mg/L	1	4/15/2019 3:04:03 PM	C59158
Copper	0.0027	0.0013	0.0060	J	mg/L	1	4/15/2019 3:04:03 PM	C59158
Iron	ND	0.0087	0.020		mg/L	1	4/15/2019 3:04:03 PM	C59158
Magnesium	ND	0.050	1.0		mg/L	1	4/15/2019 3:04:03 PM	C59158
Manganese	0.00052	0.00029	0.0020	J	mg/L	1	4/15/2019 3:04:03 PM	C59158
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/15/2019 3:04:03 PM	C59158
Nickel	ND	0.0040	0.010		mg/L	1	4/15/2019 3:04:03 PM	C59158
Potassium	ND	0.16	1.0		mg/L	1	4/15/2019 3:04:03 PM	C59158
Silver	ND	0.00094	0.0050		mg/L	1	4/15/2019 3:04:03 PM	C59158
Sodium	ND	0.42	1.0		mg/L	1	4/15/2019 3:04:03 PM	C59158
Zinc	0.023	0.0023	0.010		mg/L	1	4/17/2019 9:13:03 AM	A59216
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	0.0071	0.0011	0.020	J	mg/L	1	4/23/2019 6:00:14 PM	44260
Barium	0.00075	0.00049	0.0020	J	mg/L	1	4/23/2019 6:00:14 PM	44260
Beryllium	ND	0.00022	0.0020		mg/L	1	4/23/2019 6:00:14 PM	44260

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: FB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 11:00:00 AM
Lab ID: 1904535-005
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Boron	0.0051	0.0018	0.040	J	mg/L	1	4/23/2019 6:00:14 PM	44260
Cadmium	0.00078	0.00074	0.0020	J	mg/L	1	4/23/2019 6:00:14 PM	44260
Chromium	ND	0.0012	0.0060		mg/L	1	4/23/2019 6:00:14 PM	44260
Cobalt	ND	0.0012	0.0060		mg/L	1	4/23/2019 6:00:14 PM	44260
Copper	ND	0.0041	0.0060		mg/L	1	4/23/2019 6:00:14 PM	44260
Iron	0.0074	0.0061	0.020	J	mg/L	1	4/23/2019 6:00:14 PM	44260
Manganese	0.00057	0.000060	0.0020	J	mg/L	1	4/23/2019 6:00:14 PM	44260
Molybdenum	ND	0.0021	0.0080		mg/L	1	4/23/2019 6:00:14 PM	44260
Nickel	ND	0.0015	0.010		mg/L	1	4/23/2019 6:00:14 PM	44260
Silver	ND	0.0014	0.0050		mg/L	1	4/23/2019 6:00:14 PM	44260
Zinc	0.013	0.0058	0.010		mg/L	1	4/23/2019 6:00:14 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/22/2019 7:51:09 PM	D59357
Arsenic	ND	0.00010	0.0010		mg/L	1	4/22/2019 7:51:09 PM	D59357
Lead	ND	0.000055	0.00050		mg/L	1	4/22/2019 7:51:09 PM	D59357
Selenium	ND	0.00017	0.0010		mg/L	1	4/22/2019 7:51:09 PM	D59357
Thallium	ND	0.000048	0.00050		mg/L	1	4/22/2019 7:51:09 PM	D59357
Uranium	ND	0.000075	0.00050		mg/L	1	4/22/2019 7:51:09 PM	D59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/17/2019 7:21:57 PM	44260
Arsenic	ND	0.00031	0.0010		mg/L	1	4/17/2019 7:21:57 PM	44260
Lead	ND	0.000026	0.00050		mg/L	1	4/17/2019 7:21:57 PM	44260
Selenium	ND	0.00048	0.0010		mg/L	1	4/23/2019 3:58:48 PM	44260
Thallium	ND	0.000052	0.00050		mg/L	1	4/17/2019 7:21:57 PM	44260
Uranium	ND	0.000085	0.00050		mg/L	1	4/17/2019 7:21:57 PM	44260
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Acenaphthylene	ND	6.2	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Aniline	ND	6.2	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Anthracene	ND	5.7	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Azobenzene	ND	6.7	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Benzoic acid	ND	6.3	20		µg/L	1	4/17/2019 5:21:23 PM	44353
Benzyl alcohol	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: FB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 11:00:00 AM
Lab ID: 1904535-005
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/17/2019 5:21:23 PM	44353
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Carbazole	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/17/2019 5:21:23 PM	44353
4-Chloroaniline	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2-Chlorophenol	ND	5.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Chrysene	ND	6.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Dibenzofuran	ND	6.9	10		µg/L	1	4/17/2019 5:21:23 PM	44353
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Diethyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/17/2019 5:21:23 PM	44353
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/17/2019 5:21:23 PM	44353
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/17/2019 5:21:23 PM	44353
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/17/2019 5:21:23 PM	44353
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Fluoranthene	ND	5.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Fluorene	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Hexachloroethane	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Isophorone	ND	6.2	10		µg/L	1	4/17/2019 5:21:23 PM	44353
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: FB01
Project: Groundwater Sampling
Collection Date: 4/9/2019 11:00:00 AM
Lab ID: 1904535-005
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	4/17/2019 5:21:23 PM	44353
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/17/2019 5:21:23 PM	44353
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/17/2019 5:21:23 PM	44353
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/17/2019 5:21:23 PM	44353
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Naphthalene	ND	5.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2-Nitroaniline	ND	5.9	10		µg/L	1	4/17/2019 5:21:23 PM	44353
3-Nitroaniline	ND	6.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
4-Nitroaniline	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Nitrobenzene	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2-Nitrophenol	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
4-Nitrophenol	ND	5.6	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Pentachlorophenol	ND	5.3	20		µg/L	1	4/17/2019 5:21:23 PM	44353
Phenanthrene	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Phenol	ND	6.0	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Pyrene	ND	6.5	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Pyridine	ND	5.4	10		µg/L	1	4/17/2019 5:21:23 PM	44353
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/17/2019 5:21:23 PM	44353
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/17/2019 5:21:23 PM	44353
Surr: 2-Fluorophenol	44.3	0	15-101		%Rec	1	4/17/2019 5:21:23 PM	44353
Surr: Phenol-d5	34.8	0	15-84.6		%Rec	1	4/17/2019 5:21:23 PM	44353
Surr: 2,4,6-Tribromophenol	63.4	0	27.8-112		%Rec	1	4/17/2019 5:21:23 PM	44353
Surr: Nitrobenzene-d5	58.6	0	33-113		%Rec	1	4/17/2019 5:21:23 PM	44353
Surr: 2-Fluorobiphenyl	47.9	0	26.6-107		%Rec	1	4/17/2019 5:21:23 PM	44353
Surr: 4-Terphenyl-d14	60.5	0	18.7-148		%Rec	1	4/17/2019 5:21:23 PM	44353
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/17/2019 9:51:01 PM	R5924
Toluene	1.0	0.35	1.0		µg/L	1	4/17/2019 9:51:01 PM	R5924
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/17/2019 9:51:01 PM	R5924
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/17/2019 9:51:01 PM	R5924
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/17/2019 9:51:01 PM	R5924
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	4/17/2019 9:51:01 PM	R5924
Surr: 4-Bromofluorobenzene	95.9	0	70-130		%Rec	1	4/17/2019 9:51:01 PM	R5924
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	4/17/2019 9:51:01 PM	R5924
Surr: Toluene-d8	102	0	70-130		%Rec	1	4/17/2019 9:51:01 PM	R5924

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: West LDU
Project: Groundwater Sampling
Collection Date: 4/9/2019 11:45:00 AM
Lab ID: 1904535-006
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	7.4	0.35	1.0		mg/L	1	4/12/2019 7:08:30 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 7:08:30 AM	44267
Surr: DNOP	111	0	70-130		%Rec	1	4/12/2019 7:08:30 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.57	0.021	0.050		mg/L	1	4/17/2019 11:30:38 AM	R59232
Surr: BFB	177	0	72.8-125	S	%Rec	1	4/17/2019 11:30:38 AM	R59232
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	16	0.050	0.40	*	mg/L	20	4/17/2019 9:17:34 AM	A59216
Barium	0.10	0.00065	0.0020		mg/L	1	4/15/2019 3:10:55 PM	C59158
Beryllium	0.0063	0.00028	0.0020	*	mg/L	1	4/15/2019 3:10:55 PM	C59158
Boron	0.36	0.0045	0.040		mg/L	1	4/15/2019 3:10:55 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 3:10:55 PM	C59158
Chromium	0.66	0.0015	0.0060	*	mg/L	1	4/15/2019 3:10:55 PM	C59158
Cobalt	0.0070	0.0031	0.0060		mg/L	1	4/17/2019 9:15:27 AM	A59216
Copper	ND	0.0013	0.0060		mg/L	1	4/15/2019 3:10:55 PM	C59158
Iron	1400	17	40	*	mg/L	2E+	4/17/2019 9:28:18 AM	A59216
Manganese	81	0.029	0.20	*	mg/L	100	4/17/2019 9:19:28 AM	A59216
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/15/2019 3:10:55 PM	C59158
Nickel	0.48	0.0040	0.010	*	mg/L	1	4/15/2019 3:10:55 PM	C59158
Silver	ND	0.00094	0.0050		mg/L	1	4/15/2019 3:10:55 PM	C59158
Zinc	0.039	0.0023	0.010		mg/L	1	4/17/2019 9:15:27 AM	A59216
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	15	0.021	0.40	*	mg/L	20	4/23/2019 6:16:10 PM	44260
Barium	0.092	0.0024	0.010		mg/L	5	4/23/2019 6:12:18 PM	44260
Beryllium	0.0061	0.0011	0.010	J*	mg/L	5	4/23/2019 6:12:18 PM	44260
Boron	0.40	0.0091	0.20		mg/L	5	4/23/2019 6:12:18 PM	44260
Cadmium	ND	0.0037	0.010		mg/L	5	4/23/2019 6:12:18 PM	44260
Chromium	0.74	0.0060	0.030	*	mg/L	5	4/23/2019 6:12:18 PM	44260
Cobalt	0.019	0.0062	0.030	J	mg/L	5	4/23/2019 6:12:18 PM	44260
Copper	ND	0.020	0.030		mg/L	5	4/23/2019 6:12:18 PM	44260
Iron	1300	12	40	*	mg/L	2E+	4/23/2019 6:19:59 PM	44260
Manganese	77	0.0060	0.20	*	mg/L	100	4/23/2019 6:18:08 PM	44260
Molybdenum	ND	0.010	0.040		mg/L	5	4/23/2019 6:12:18 PM	44260
Nickel	0.84	0.0075	0.050	*	mg/L	5	4/23/2019 6:12:18 PM	44260
Silver	ND	0.0071	0.025		mg/L	5	4/23/2019 6:12:18 PM	44260
Zinc	0.072	0.029	0.050		mg/L	5	4/23/2019 6:12:18 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: West LDU
Project: Groundwater Sampling
Collection Date: 4/9/2019 11:45:00 AM
Lab ID: 1904535-006
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	4/22/2019 8:01:41 PM	D59357
Arsenic	ND	0.00050	0.0050		mg/L	5	4/22/2019 8:01:41 PM	D59357
Lead	ND	0.00027	0.0025		mg/L	5	4/22/2019 8:01:41 PM	D59357
Selenium	ND	0.00086	0.0050		mg/L	5	4/22/2019 8:01:41 PM	D59357
Thallium	ND	0.00024	0.0025		mg/L	5	4/22/2019 8:01:41 PM	D59357
Uranium	ND	0.00037	0.0025		mg/L	5	4/22/2019 8:01:41 PM	D59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00078	0.0050		mg/L	5	4/17/2019 7:24:04 PM	44260
Arsenic	ND	0.0016	0.0050		mg/L	5	4/17/2019 7:24:04 PM	44260
Lead	0.00016	0.00013	0.0025	J	mg/L	5	4/17/2019 7:24:04 PM	44260
Selenium	ND	0.0024	0.0050		mg/L	5	4/23/2019 4:00:55 PM	44260
Thallium	ND	0.00026	0.0025		mg/L	5	4/17/2019 7:24:04 PM	44260
Uranium	ND	0.00042	0.0025		mg/L	5	4/17/2019 7:24:04 PM	44260
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	160	0.33	2.0		µg/L	2	4/17/2019 11:45:30 PM	R59248
Toluene	ND	0.70	2.0		µg/L	2	4/17/2019 11:45:30 PM	R59248
Ethylbenzene	20	0.26	2.0		µg/L	2	4/17/2019 11:45:30 PM	R59248
Methyl tert-butyl ether (MTBE)	2.9	0.91	2.0		µg/L	2	4/17/2019 11:45:30 PM	R59248
Xylenes, Total	2.4	0.91	3.0	J	µg/L	2	4/17/2019 11:45:30 PM	R59248
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	2	4/17/2019 11:45:30 PM	R59248
Surr: 4-Bromofluorobenzene	98.4	0	70-130		%Rec	2	4/17/2019 11:45:30 PM	R59248
Surr: Dibromofluoromethane	106	0	70-130		%Rec	2	4/17/2019 11:45:30 PM	R59248
Surr: Toluene-d8	99.4	0	70-130		%Rec	2	4/17/2019 11:45:30 PM	R59248

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: East LDU
Project: Groundwater Sampling
Collection Date: 4/9/2019 12:00:00 PM
Lab ID: 1904535-007
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.0	0.35	1.0		mg/L	1	4/12/2019 7:30:31 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 7:30:31 AM	44267
Surr: DNOP	105	0	70-130		%Rec	1	4/12/2019 7:30:31 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	3.5	0.11	0.25		mg/L	5	4/17/2019 12:16:21 PM	R59232
Surr: BFB	136	0	72.8-125	S	%Rec	5	4/17/2019 12:16:21 PM	R59232
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.056	0.0025	0.020		mg/L	1	4/15/2019 3:29:45 PM	C59158
Barium	0.11	0.00065	0.0020		mg/L	1	4/15/2019 3:29:45 PM	C59158
Beryllium	ND	0.00028	0.0020		mg/L	1	4/15/2019 3:29:45 PM	C59158
Boron	0.0091	0.0045	0.040	J	mg/L	1	4/15/2019 3:29:45 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 3:29:45 PM	C59158
Chromium	0.028	0.0015	0.0060		mg/L	1	4/15/2019 3:29:45 PM	C59158
Cobalt	ND	0.0031	0.0060		mg/L	1	4/15/2019 3:29:45 PM	C59158
Copper	ND	0.0013	0.0060		mg/L	1	4/15/2019 3:29:45 PM	C59158
Iron	0.039	0.0087	0.020		mg/L	1	4/17/2019 9:30:29 AM	A59216
Manganese	0.28	0.00029	0.0020	*	mg/L	1	4/15/2019 3:29:45 PM	C59158
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/15/2019 3:29:45 PM	C59158
Nickel	ND	0.0040	0.010		mg/L	1	4/15/2019 3:29:45 PM	C59158
Silver	0.0019	0.00094	0.0050	J	mg/L	1	4/15/2019 3:29:45 PM	C59158
Zinc	0.013	0.0023	0.010		mg/L	1	4/17/2019 9:30:29 AM	A59216
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	0.25	0.0011	0.020	*	mg/L	1	4/23/2019 6:22:12 PM	44260
Barium	0.11	0.00049	0.0020		mg/L	1	4/23/2019 6:22:12 PM	44260
Beryllium	ND	0.00022	0.0020		mg/L	1	4/23/2019 6:22:12 PM	44260
Boron	0.0077	0.0018	0.040	J	mg/L	1	4/23/2019 6:22:12 PM	44260
Cadmium	ND	0.00074	0.0020		mg/L	1	4/23/2019 6:22:12 PM	44260
Chromium	0.093	0.0012	0.0060		mg/L	1	4/23/2019 6:22:12 PM	44260
Cobalt	ND	0.0012	0.0060		mg/L	1	4/23/2019 6:22:12 PM	44260
Copper	ND	0.0041	0.0060		mg/L	1	4/23/2019 6:22:12 PM	44260
Iron	0.12	0.0061	0.020		mg/L	1	4/23/2019 6:22:12 PM	44260
Manganese	0.25	0.000060	0.0020	*	mg/L	1	4/23/2019 6:22:12 PM	44260
Molybdenum	ND	0.0021	0.0080		mg/L	1	4/23/2019 6:22:12 PM	44260
Nickel	0.010	0.0015	0.010		mg/L	1	4/23/2019 6:22:12 PM	44260
Silver	ND	0.0014	0.0050		mg/L	1	4/23/2019 6:22:12 PM	44260
Zinc	0.013	0.0058	0.010		mg/L	1	4/23/2019 6:22:12 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: East LDU
Project: Groundwater Sampling
Collection Date: 4/9/2019 12:00:00 PM
Lab ID: 1904535-007
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/22/2019 8:06:57 PM	D59357
Arsenic	ND	0.00010	0.0010		mg/L	1	4/22/2019 8:06:57 PM	D59357
Lead	ND	0.000055	0.00050		mg/L	1	4/22/2019 8:06:57 PM	D59357
Selenium	ND	0.00017	0.0010		mg/L	1	4/22/2019 8:06:57 PM	D59357
Thallium	ND	0.000048	0.00050		mg/L	1	4/22/2019 8:06:57 PM	D59357
Uranium	ND	0.000075	0.00050		mg/L	1	4/22/2019 8:06:57 PM	D59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/17/2019 7:26:12 PM	44260
Arsenic	0.00032	0.00031	0.0010	J	mg/L	1	4/17/2019 7:26:12 PM	44260
Lead	0.00022	0.000026	0.00050	J	mg/L	1	4/17/2019 7:26:12 PM	44260
Selenium	ND	0.00048	0.0010		mg/L	1	4/23/2019 4:03:02 PM	44260
Thallium	0.000091	0.000052	0.00050	J	mg/L	1	4/17/2019 7:26:12 PM	44260
Uranium	0.00021	0.000085	0.00050	J	mg/L	1	4/17/2019 7:26:12 PM	44260
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	1500	3.3	20		µg/L	20	4/18/2019 12:14:04 AM	R59248
Toluene	28	0.70	2.0		µg/L	2	4/18/2019 12:42:41 AM	R59248
Ethylbenzene	150	0.26	2.0		µg/L	2	4/18/2019 12:42:41 AM	R59248
Methyl tert-butyl ether (MTBE)	1.2	0.91	2.0	J	µg/L	2	4/18/2019 12:42:41 AM	R59248
Xylenes, Total	27	0.91	3.0		µg/L	2	4/18/2019 12:42:41 AM	R59248
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	2	4/18/2019 12:42:41 AM	R59248
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	2	4/18/2019 12:42:41 AM	R59248
Surr: Dibromofluoromethane	105	0	70-130		%Rec	2	4/18/2019 12:42:41 AM	R59248
Surr: Toluene-d8	102	0	70-130		%Rec	2	4/18/2019 12:42:41 AM	R59248

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUP01
Project: Groundwater Sampling
Collection Date: 4/9/2019
Lab ID: 1904535-008
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	4/11/2019 8:41:52 PM	44280
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	4/12/2019 7:52:38 AM	44267
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	4/12/2019 7:52:38 AM	44267
Surr: DNOP	103	0	70-130		%Rec	1	4/12/2019 7:52:38 AM	44267
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.067	0.021	0.050		mg/L	1	4/17/2019 10:45:07 AM	R59232
Surr: BFB	108	0	72.8-125		%Rec	1	4/17/2019 10:45:07 AM	R59232
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.74	0.25	0.50		mg/L	5	4/10/2019 4:11:52 PM	R59074
Chloride	390	10	10		mg/L	20	4/10/2019 4:24:44 PM	R59074
Nitrogen, Nitrite (As N)	ND	0.35	0.50		mg/L	5	4/10/2019 4:11:52 PM	R59074
Bromide	2.4	0.068	0.50		mg/L	5	4/10/2019 4:11:52 PM	R59074
Nitrogen, Nitrate (As N)	5.7	0.14	0.50		mg/L	5	4/10/2019 4:11:52 PM	R59074
Phosphorus, Orthophosphate (As P)	ND	0.13	2.5		mg/L	5	4/10/2019 4:11:52 PM	R59074
Sulfate	170	0.32	2.5		mg/L	5	4/10/2019 4:11:52 PM	R59074
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	4/15/2019 3:36:44 PM	C59158
Barium	0.12	0.00065	0.0020		mg/L	1	4/15/2019 3:36:44 PM	C59158
Beryllium	ND	0.00028	0.0020		mg/L	1	4/15/2019 3:36:44 PM	C59158
Boron	1.7	0.023	0.20		mg/L	5	4/15/2019 3:38:53 PM	C59158
Cadmium	ND	0.00055	0.0020		mg/L	1	4/15/2019 3:36:44 PM	C59158
Calcium	25	0.062	1.0		mg/L	1	4/15/2019 3:36:44 PM	C59158
Chromium	ND	0.0015	0.0060		mg/L	1	4/15/2019 3:36:44 PM	C59158
Cobalt	ND	0.0031	0.0060		mg/L	1	4/15/2019 3:36:44 PM	C59158
Copper	0.0073	0.0013	0.0060		mg/L	1	4/15/2019 3:36:44 PM	C59158
Iron	0.013	0.0087	0.020	J	mg/L	1	4/15/2019 3:36:44 PM	C59158
Magnesium	4.4	0.050	1.0		mg/L	1	4/15/2019 3:36:44 PM	C59158
Manganese	0.17	0.00029	0.0020	*	mg/L	1	4/15/2019 3:36:44 PM	C59158
Molybdenum	ND	0.0067	0.0080		mg/L	1	4/15/2019 3:36:44 PM	C59158
Nickel	0.018	0.0040	0.010		mg/L	1	4/15/2019 3:36:44 PM	C59158
Potassium	2.3	0.16	1.0		mg/L	1	4/15/2019 3:36:44 PM	C59158
Silver	0.0013	0.00094	0.0050	J	mg/L	1	4/15/2019 3:36:44 PM	C59158
Sodium	620	4.2	10		mg/L	10	4/15/2019 3:40:52 PM	C59158
Zinc	0.016	0.0023	0.010		mg/L	1	4/17/2019 9:32:41 AM	A59216
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Aluminum	0.14	0.0011	0.020		mg/L	1	4/23/2019 6:24:24 PM	44260

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUP01
Project: Groundwater Sampling
Collection Date: 4/9/2019
Lab ID: 1904535-008
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **bcv**	
Barium	0.11	0.00049	0.0020		mg/L	1	4/23/2019 6:24:24 PM	44260
Beryllium	ND	0.00022	0.0020		mg/L	1	4/23/2019 6:24:24 PM	44260
Boron	1.6	0.0091	0.20		mg/L	5	4/23/2019 6:26:32 PM	44260
Cadmium	ND	0.00074	0.0020		mg/L	1	4/23/2019 6:24:24 PM	44260
Chromium	ND	0.0012	0.0060		mg/L	1	4/23/2019 6:24:24 PM	44260
Cobalt	ND	0.0012	0.0060		mg/L	1	4/23/2019 6:24:24 PM	44260
Copper	0.0042	0.0041	0.0060	J	mg/L	1	4/23/2019 6:24:24 PM	44260
Iron	0.096	0.0061	0.020		mg/L	1	4/23/2019 6:24:24 PM	44260
Manganese	0.19	0.000060	0.0020	*	mg/L	1	4/23/2019 6:24:24 PM	44260
Molybdenum	0.0036	0.0021	0.0080	J	mg/L	1	4/23/2019 6:24:24 PM	44260
Nickel	0.016	0.0015	0.010		mg/L	1	4/23/2019 6:24:24 PM	44260
Silver	ND	0.0014	0.0050		mg/L	1	4/23/2019 6:24:24 PM	44260
Zinc	0.017	0.0058	0.010		mg/L	1	4/23/2019 6:24:24 PM	44260
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	4/22/2019 8:12:14 PM	D59357
Arsenic	0.0011	0.00010	0.0010		mg/L	1	4/22/2019 8:12:14 PM	D59357
Lead	0.00019	0.000055	0.00050	J	mg/L	1	4/22/2019 8:12:14 PM	D59357
Selenium	0.0037	0.00017	0.0010		mg/L	1	4/22/2019 8:12:14 PM	D59357
Thallium	ND	0.000048	0.00050		mg/L	1	4/22/2019 8:12:14 PM	D59357
Uranium	0.022	0.000075	0.00050		mg/L	1	4/22/2019 8:12:14 PM	D59357
200.8 ICPMS METALS:TOTAL							Analyst: **pmf**	
Antimony	ND	0.00016	0.0010		mg/L	1	4/17/2019 7:28:19 PM	44260
Arsenic	0.0012	0.00031	0.0010		mg/L	1	4/17/2019 7:28:19 PM	44260
Lead	0.00032	0.000026	0.00050	J	mg/L	1	4/17/2019 7:28:19 PM	44260
Selenium	0.0040	0.00048	0.0010		mg/L	1	4/23/2019 4:05:09 PM	44260
Thallium	ND	0.000052	0.00050		mg/L	1	4/17/2019 7:28:19 PM	44260
Uranium	0.023	0.000085	0.00050		mg/L	1	4/17/2019 7:28:19 PM	44260
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Acenaphthylene	ND	6.2	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Aniline	ND	6.2	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Anthracene	ND	5.7	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Azobenzene	ND	6.7	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Benz(a)anthracene	ND	5.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Benzo(a)pyrene	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	4/17/2019 5:50:32 PM	44353

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUP01
Project: Groundwater Sampling
Collection Date: 4/9/2019
Lab ID: 1904535-008
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	6.6	6.3	20	J	µg/L	1	4/17/2019 5:50:32 PM	44353
Benzyl alcohol	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	4/17/2019 5:50:32 PM	44353
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Carbazole	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	4/17/2019 5:50:32 PM	44353
4-Chloroaniline	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2-Chloronaphthalene	ND	6.1	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2-Chlorophenol	ND	5.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Chrysene	ND	6.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Dibenzofuran	ND	6.9	10		µg/L	1	4/17/2019 5:50:32 PM	44353
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Diethyl phthalate	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Dimethyl phthalate	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	4/17/2019 5:50:32 PM	44353
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	4/17/2019 5:50:32 PM	44353
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	4/17/2019 5:50:32 PM	44353
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	4/17/2019 5:50:32 PM	44353
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Fluoranthene	ND	5.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Fluorene	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Hexachlorobenzene	ND	6.2	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Hexachlorobutadiene	ND	6.4	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Hexachloroethane	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Isophorone	ND	6.2	10		µg/L	1	4/17/2019 5:50:32 PM	44353

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUP01
Project: Groundwater Sampling
Collection Date: 4/9/2019
Lab ID: 1904535-008
Matrix: AQUEOUS
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	7.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2-Methylnaphthalene	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2-Methylphenol	ND	6.3	10		µg/L	1	4/17/2019 5:50:32 PM	44353
3+4-Methylphenol	ND	5.4	10		µg/L	1	4/17/2019 5:50:32 PM	44353
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	4/17/2019 5:50:32 PM	44353
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	4/17/2019 5:50:32 PM	44353
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Naphthalene	ND	5.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2-Nitroaniline	ND	5.9	10		µg/L	1	4/17/2019 5:50:32 PM	44353
3-Nitroaniline	ND	6.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
4-Nitroaniline	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Nitrobenzene	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2-Nitrophenol	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
4-Nitrophenol	ND	5.6	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Pentachlorophenol	ND	5.3	20		µg/L	1	4/17/2019 5:50:32 PM	44353
Phenanthrene	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Phenol	ND	6.0	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Pyrene	ND	6.5	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Pyridine	ND	5.4	10		µg/L	1	4/17/2019 5:50:32 PM	44353
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	4/17/2019 5:50:32 PM	44353
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	4/17/2019 5:50:32 PM	44353
Surr: 2-Fluorophenol	50.2	0	15-101		%Rec	1	4/17/2019 5:50:32 PM	44353
Surr: Phenol-d5	38.7	0	15-84.6		%Rec	1	4/17/2019 5:50:32 PM	44353
Surr: 2,4,6-Tribromophenol	77.5	0	27.8-112		%Rec	1	4/17/2019 5:50:32 PM	44353
Surr: Nitrobenzene-d5	74.5	0	33-113		%Rec	1	4/17/2019 5:50:32 PM	44353
Surr: 2-Fluorobiphenyl	59.3	0	26.6-107		%Rec	1	4/17/2019 5:50:32 PM	44353
Surr: 4-Terphenyl-d14	70.5	0	18.7-148		%Rec	1	4/17/2019 5:50:32 PM	44353
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	3.3	0.17	1.0		µg/L	1	4/18/2019 1:11:16 AM	R5924
Toluene	ND	0.35	1.0		µg/L	1	4/18/2019 1:11:16 AM	R5924
Ethylbenzene	1.2	0.13	1.0		µg/L	1	4/18/2019 1:11:16 AM	R5924
Methyl tert-butyl ether (MTBE)	39	0.46	1.0		µg/L	1	4/18/2019 1:11:16 AM	R5924
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/18/2019 1:11:16 AM	R5924
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	4/18/2019 1:11:16 AM	R5924
Surr: 4-Bromofluorobenzene	95.4	0	70-130		%Rec	1	4/18/2019 1:11:16 AM	R5924
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	4/18/2019 1:11:16 AM	R5924
Surr: Toluene-d8	99.7	0	70-130		%Rec	1	4/18/2019 1:11:16 AM	R5924

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: Groundwater Sampling
Collection Date:
Lab ID: 1904535-009
Matrix: TRIP BLANK
Received Date: 4/9/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	4/11/2019 8:56:44 PM	44280
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	4/17/2019 2:10:20 PM	R59232
Surr: BFB	85.8	0	72.8-125		%Rec	1	4/17/2019 2:10:20 PM	R59232
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	4/18/2019 1:39:50 AM	R59248
Toluene	ND	0.35	1.0		µg/L	1	4/18/2019 1:39:50 AM	R59248
Ethylbenzene	ND	0.13	1.0		µg/L	1	4/18/2019 1:39:50 AM	R59248
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	4/18/2019 1:39:50 AM	R59248
Xylenes, Total	ND	0.45	1.5		µg/L	1	4/18/2019 1:39:50 AM	R59248
Surr: 1,2-Dichloroethane-d4	99.7	0	70-130		%Rec	1	4/18/2019 1:39:50 AM	R59248
Surr: 4-Bromofluorobenzene	95.6	0	70-130		%Rec	1	4/18/2019 1:39:50 AM	R59248
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	4/18/2019 1:39:50 AM	R59248
Surr: Toluene-d8	101	0	70-130		%Rec	1	4/18/2019 1:39:50 AM	R59248

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C59158**	RunNo: **59158**
Prep Date:	Analysis Date: **4/15/2019**	SeqNo: **1991411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	0.0040	0.0060								J
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	0.00097	0.0050								J
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59158**	RunNo: **59158**
Prep Date:	Analysis Date: **4/15/2019**	SeqNo: **1991413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	111	50	150			J
Barium	0.0021	0.0020	0.002000	0	105	50	150			
Beryllium	0.0022	0.0020	0.002000	0	108	50	150			
Boron	0.041	0.040	0.04000	0	102	50	150			
Cadmium	0.0023	0.0020	0.002000	0	117	50	150			
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0066	0.0060	0.006000	0	110	50	150			
Cobalt	0.0058	0.0060	0.006000	0	96.5	50	150			J
Copper	0.0064	0.0060	0.006000	0	106	50	150			
Iron	0.021	0.020	0.02000	0	105	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0089	0.0080	0.008000	0	111	50	150			
Potassium	0.50	1.0	0.5000	0	100	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59158**	RunNo: **59158**
Prep Date:	Analysis Date: **4/15/2019**	SeqNo: **1991413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.47	1.0	0.5000	0	94.9	50	150			J
Zinc	0.0067	0.010	0.005000	0	135	50	150			J

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C59158**	RunNo: **59158**
Prep Date:	Analysis Date: **4/15/2019**	SeqNo: **1991415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	104	85	115			
Barium	0.47	0.0020	0.5000	0	94.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.7	85	115			
Boron	0.49	0.040	0.5000	0	97.1	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.2	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.49	0.0060	0.5000	0	97.1	85	115			
Cobalt	0.49	0.0060	0.5000	0	97.2	85	115			
Copper	0.50	0.0060	0.5000	0	99.2	85	115			
Iron	0.49	0.020	0.5000	0	98.9	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.3	85	115			
Nickel	0.48	0.010	0.5000	0	96.7	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Silver	0.096	0.0050	0.1000	0	95.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.48	0.010	0.5000	0	95.8	85	115			

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59158**	RunNo: **59158**
Prep Date:	Analysis Date: **4/15/2019**	SeqNo: **1991419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nickel	0.0055	0.010	0.005000	0	109	50	150			J

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59216**	RunNo: **59216**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1993712** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59216**	RunNo: **59216**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1993712** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59216**	RunNo: **59216**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1993713** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	110	50	150			J
Cobalt	0.0068	0.0060	0.006000	0	113	50	150			
Iron	0.025	0.020	0.02000	0	126	50	150			
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Zinc	0.0068	0.010	0.005000	0	135	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59216**	RunNo: **59216**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1993714** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.9	85	115			
Iron	0.50	0.020	0.5000	0	99.7	85	115			
Manganese	0.49	0.0020	0.5000	0	97.5	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **MB-44260**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **44260**	RunNo: **59090**
Prep Date: **4/10/2019**	Analysis Date: **4/11/2019**	SeqNo: **1988971** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0085	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Iron	0.0068	0.020								J
Manganese	0.00030	0.0020								J
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								

Sample ID: **LLLCS-44260**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **44260**	RunNo: **59090**
Prep Date: **4/10/2019**	Analysis Date: **4/11/2019**	SeqNo: **1988974** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.014	0.020	0.01000	0	139	50	150			J
Barium	0.0021	0.0020	0.002000	0	107	50	150			
Beryllium	0.0020	0.0020	0.002000	0	98.1	50	150			J
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0024	0.0020	0.002000	0	121	50	150			
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Cobalt	0.0068	0.0060	0.006000	0	114	50	150			
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Molybdenum	0.0088	0.0080	0.008000	0	110	50	150			
Nickel	0.0029	0.010	0.005000	0	58.2	50	150			J
Silver	0.0048	0.0050	0.005000	0	95.3	50	150			J

Sample ID: **LCS-44260**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **44260**	RunNo: **59090**
Prep Date: **4/10/2019**	Analysis Date: **4/11/2019**	SeqNo: **1988976** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	96.5	85	115			
Beryllium	0.49	0.0020	0.5000	0	97.5	85	115			
Boron	0.48	0.040	0.5000	0	96.4	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **LCS-44260** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **44260** RunNo: **59090**
Prep Date: **4/10/2019** Analysis Date: **4/11/2019** SeqNo: **1988976** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.4	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Manganese	0.48	0.0020	0.5000	0	96.6	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.6	85	115			
Nickel	0.48	0.010	0.5000	0	96.2	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID: **MB-44260** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **44260** RunNo: **59128**
Prep Date: **4/10/2019** Analysis Date: **4/12/2019** SeqNo: **1990272** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0044	0.0060								J
Zinc	0.0076	0.010								J

Sample ID: **LLLCS-44260** SampType: **LCSLL** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **44260** RunNo: **59128**
Prep Date: **4/10/2019** Analysis Date: **4/12/2019** SeqNo: **1990273** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.012	0.0060	0.006000	0	195	50	150			S
Zinc	0.012	0.010	0.005000	0	238	50	150			S

Sample ID: **LCS-44260** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **44260** RunNo: **59128**
Prep Date: **4/10/2019** Analysis Date: **4/12/2019** SeqNo: **1990274** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.56	0.0060	0.5000	0	112	85	115			
Zinc	0.58	0.010	0.5000	0	116	85	115			S

Sample ID: **1904535-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **NAPIS-2** Batch ID: **44260** RunNo: **59348**
Prep Date: **4/10/2019** Analysis Date: **4/22/2019** SeqNo: **1998688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.51	0.0020	0.5000	0.0002433	103	70	130			
Cadmium	0.49	0.0020	0.5000	0	98.9	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **1904535-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **NAPIS-2** Batch ID: **44260** RunNo: **59348**

Prep Date: **4/10/2019** Analysis Date: **4/22/2019** SeqNo: **1998688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.48	0.0060	0.5000	0.001696	95.3	70	130			
Cobalt	0.45	0.0060	0.5000	0.001407	89.6	70	130			
Copper	0.53	0.0060	0.5000	0.004232	105	70	130			
Molybdenum	0.48	0.0080	0.5000	0.005105	95.9	70	130			
Nickel	0.48	0.010	0.5000	0.01478	92.9	70	130			
Silver	0.11	0.0050	0.1000	0	109	70	130			
Zinc	0.49	0.010	0.5000	0.01870	95.2	70	130			

Sample ID: **1904535-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **NAPIS-2** Batch ID: **44260** RunNo: **59348**

Prep Date: **4/10/2019** Analysis Date: **4/22/2019** SeqNo: **1998689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.51	0.0020	0.5000	0.0002433	102	70	130	0.867	20	
Cadmium	0.49	0.0020	0.5000	0	98.5	70	130	0.343	20	
Chromium	0.48	0.0060	0.5000	0.001696	95.6	70	130	0.293	20	
Cobalt	0.44	0.0060	0.5000	0.001407	88.6	70	130	1.08	20	
Copper	0.53	0.0060	0.5000	0.004232	105	70	130	0.100	20	
Molybdenum	0.49	0.0080	0.5000	0.005105	97.2	70	130	1.33	20	
Nickel	0.48	0.010	0.5000	0.01478	92.8	70	130	0.114	20	
Silver	0.11	0.0050	0.1000	0	111	70	130	1.33	20	
Zinc	0.49	0.010	0.5000	0.01870	94.6	70	130	0.616	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C59357**	RunNo: **59357**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1999290** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59357**	RunNo: **59357**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1999292** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00080	0.0010	0.001000	0	79.8	50	150			J
Arsenic	0.00090	0.0010	0.001000	0	90.3	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.2	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.0	50	150			J
Thallium	0.00045	0.00050	0.0005000	0	90.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C59357**	RunNo: **59357**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1999294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	94.0	85	115			
Arsenic	0.023	0.0010	0.02500	0	93.9	85	115			
Lead	0.012	0.00050	0.01250	0	95.6	85	115			
Selenium	0.024	0.0010	0.02500	0	95.5	85	115			
Thallium	0.012	0.00050	0.01250	0	95.8	85	115			
Uranium	0.012	0.00050	0.01250	0	93.9	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D59357**	RunNo: **59357**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1999332** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D59357**	RunNo: **59357**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1999332** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D59357**	RunNo: **59357**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1999333** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00095	0.0010	0.001000	0	94.9	50	150			J
Arsenic	0.00089	0.0010	0.001000	0	88.8	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.9	50	150			J
Selenium	0.00078	0.0010	0.001000	0	78.3	50	150			J
Thallium	0.00044	0.00050	0.0005000	0	88.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.6	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D59357**	RunNo: **59357**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1999334** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.2	85	115			
Arsenic	0.024	0.0010	0.02500	0	98.0	85	115			
Lead	0.012	0.00050	0.01250	0	98.6	85	115			
Selenium	0.024	0.0010	0.02500	0	94.9	85	115			
Thallium	0.012	0.00050	0.01250	0	97.5	85	115			
Uranium	0.012	0.00050	0.01250	0	98.2	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **MB-44260** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **44260** RunNo: **59239**
Prep Date: **4/10/2019** Analysis Date: **4/17/2019** SeqNo: **1994842** Units: **mg/L**

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

Sample ID: **MSLLLCS-44260** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **44260** RunNo: **59239**
Prep Date: **4/10/2019** Analysis Date: **4/17/2019** SeqNo: **1994843** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00090	0.0010	0.001000	0	89.9	50	150			J
Arsenic	0.0011	0.0010	0.001000	0	107	50	150			
Lead	0.00054	0.00050	0.0005000	0	107	50	150			
Thallium	0.00041	0.00050	0.0005000	0	82.3	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.0	50	150			J

Sample ID: **MSLCS-44260** SampType: **LCS** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW** Batch ID: **44260** RunNo: **59239**
Prep Date: **4/10/2019** Analysis Date: **4/17/2019** SeqNo: **1994844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	85	115			
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.012	0.00050	0.01250	0	95.3	85	115			
Thallium	0.012	0.00050	0.01250	0	95.1	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID: **1904535-002FMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **KA-3** Batch ID: **44260** RunNo: **59239**
Prep Date: **4/10/2019** Analysis Date: **4/17/2019** SeqNo: **1994847** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0	111	70	130			
Arsenic	0.031	0.0010	0.02500	0.005582	103	70	130			
Lead	0.012	0.00050	0.01250	0.0006998	89.2	70	130			
Thallium	0.011	0.00050	0.01250	0	89.6	70	130			
Uranium	0.022	0.00050	0.01250	0.009285	99.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **1904535-002FMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **KA-3** Batch ID: **44260** RunNo: **59239**

Prep Date: **4/10/2019** Analysis Date: **4/17/2019** SeqNo: **1994848** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	107	70	130	2.95	20	
Arsenic	0.031	0.0010	0.02500	0.005582	101	70	130	2.03	20	
Lead	0.012	0.00050	0.01250	0.0006998	86.4	70	130	2.94	20	
Thallium	0.011	0.00050	0.01250	0	87.0	70	130	2.87	20	
Uranium	0.021	0.00050	0.01250	0.009285	93.8	70	130	3.41	20	

Sample ID: **MB-44260** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **PBW** Batch ID: **44260** RunNo: **59385**

Prep Date: **4/10/2019** Analysis Date: **4/23/2019** SeqNo: **2000575** Units: **mg/L**

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

Sample ID: **MSLLLCS-44260** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **BatchQC** Batch ID: **44260** RunNo: **59385**

Prep Date: **4/10/2019** Analysis Date: **4/23/2019** SeqNo: **2000576** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0012	0.0010	0.001000	0	116	50	150			

Sample ID: **MSLCS-44260** SampType: **LCS** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **LCSW** Batch ID: **44260** RunNo: **59385**

Prep Date: **4/10/2019** Analysis Date: **4/23/2019** SeqNo: **2000577** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID: **1904535-002FMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **KA-3** Batch ID: **44260** RunNo: **59385**

Prep Date: **4/10/2019** Analysis Date: **4/23/2019** SeqNo: **2000580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.027	0.0010	0.02500	0	109	70	130			

Sample ID: **1904535-002FMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **KA-3** Batch ID: **44260** RunNo: **59385**

Prep Date: **4/10/2019** Analysis Date: **4/23/2019** SeqNo: **2000581** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.027	0.0010	0.02500	0	109	70	130	0.720	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R59074**	RunNo: **59074**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988483** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59074**	RunNo: **59074**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988484** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	90	110			
Chloride	4.9	0.50	5.000	0	98.2	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.4	90	110			
Bromide	2.5	0.10	2.500	0	98.0	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.4	90	110			
Sulfate	9.9	0.50	10.00	0	98.7	90	110			

Sample ID: **1904535-005DMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB01**	Batch ID: **R59074**	RunNo: **59074**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988496** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	66.7	127			
Chloride	4.7	0.50	5.000	0	94.9	77.5	116			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	92.4	82.4	108			
Bromide	2.4	0.10	2.500	0	95.8	80.2	111			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	79.1	116			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.1	80.7	113			
Sulfate	9.6	0.50	10.00	0	95.9	74.9	123			

Sample ID: **1904535-005DMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB01**	Batch ID: **R59074**	RunNo: **59074**
Prep Date:	Analysis Date: **4/10/2019**	SeqNo: **1988497** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	66.7	127	0.898	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **1904535-005DMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **FB01** Batch ID: **R59074** RunNo: **59074**
Prep Date: Analysis Date: **4/10/2019** SeqNo: **1988497** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.1	77.5	116	1.33	20	
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	92.9	82.4	108	0.485	20	
Bromide	2.4	0.10	2.500	0	96.5	80.2	111	0.733	20	
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	79.1	116	1.19	20	
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.6	80.7	113	1.57	20	
Sulfate	9.7	0.50	10.00	0	96.8	74.9	123	0.917	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **1904535-003CMS**	SampType: **MS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **NAPIS-3**	Batch ID: **44280**	RunNo: **59112**
Prep Date: **4/11/2019**	Analysis Date: **4/11/2019**	SeqNo: **1989761** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.078	0.0094	0.09383	0	83.3	65	135			

Sample ID: **1904535-003CMSD**	SampType: **MSD**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **NAPIS-3**	Batch ID: **44280**	RunNo: **59112**
Prep Date: **4/11/2019**	Analysis Date: **4/11/2019**	SeqNo: **1989762** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.080	0.0093	0.09333	0	86.0	65	135	2.63	20	

Sample ID: **MB-44280**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44280**	RunNo: **59112**
Prep Date: **4/11/2019**	Analysis Date: **4/11/2019**	SeqNo: **1989832** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-44280**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44280**	RunNo: **59112**
Prep Date: **4/11/2019**	Analysis Date: **4/11/2019**	SeqNo: **1989833** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	105	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **LCS-44267** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **44267** RunNo: **59076**
Prep Date: **4/10/2019** Analysis Date: **4/11/2019** SeqNo: **1988552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	109	71.8	135			
Surr: DNOP	0.49		0.5000		97.6	70	130			

Sample ID: **MB-44267** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW** Batch ID: **44267** RunNo: **59076**
Prep Date: **4/10/2019** Analysis Date: **4/11/2019** SeqNo: **1988553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		108	70	130			

Sample ID: **1904535-001BMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **NAPIS-2** Batch ID: **44267** RunNo: **59076**
Prep Date: **4/10/2019** Analysis Date: **4/12/2019** SeqNo: **1989859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.9	1.0	5.000	1.473	108	68.1	137			
Surr: DNOP	0.42		0.5000		83.6	70	130			

Sample ID: **1904535-001BMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **NAPIS-2** Batch ID: **44267** RunNo: **59076**
Prep Date: **4/10/2019** Analysis Date: **4/12/2019** SeqNo: **1989860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.9	1.0	5.000	1.473	109	68.1	137	0.728	20	
Surr: DNOP	0.43		0.5000		86.1	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBW**	Batch ID: **R59232**	RunNo: **59232**							
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1994190**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.4	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSW**	Batch ID: **R59232**	RunNo: **59232**							
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1994191**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	90.0	77.7	130			
Surr: BFB	20		20.00		102	72.8	125			

Sample ID: **1904535-007AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **East LDU**	Batch ID: **R59232**	RunNo: **59232**							
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1994201**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.3	0.25	2.500	3.454	74.9	65.4	140			
Surr: BFB	150		100.0		146	72.8	125			S

Sample ID: **1904535-007AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **East LDU**	Batch ID: **R59232**	RunNo: **59232**							
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1994202**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.1	0.25	2.500	3.454	65.2	65.4	140	4.65	20	S
Surr: BFB	140		100.0		143	72.8	125	0	0	S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **R59248**	RunNo: **59248**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1995072** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.4	70	130			
Toluene	19	1.0	20.00	0	96.8	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.5	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID: **1904535-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **NAPIS-2**	Batch ID: **R59248**	RunNo: **59248**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1995075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	450	1.0	20.00	447.7	13.5	70	130			ES
Toluene	19	1.0	20.00	0	94.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.5	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Sample ID: **1904535-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **NAPIS-2**	Batch ID: **R59248**	RunNo: **59248**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1995076** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	420	1.0	20.00	447.7	-144	70	130	7.23	20	ES
Toluene	17	1.0	20.00	0	87.4	70	130	8.28	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.5		10.00		94.7	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		105	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		95.7	70	130	0	0	

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R59248**	RunNo: **59248**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1995092** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **R59248**	RunNo: **59248**
Prep Date:	Analysis Date: **4/17/2019**	SeqNo: **1995092** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.0	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **mb-44353**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44353**	RunNo: **59211**
Prep Date: **4/16/2019**	Analysis Date: **4/17/2019**	SeqNo: **1994240** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	9.3	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **mb-44353**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44353**	RunNo: **59211**
Prep Date: **4/16/2019**	Analysis Date: **4/17/2019**	SeqNo: **1994240** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		58.2	15	101			
Surr: Phenol-d5	94		200.0		47.1	15	84.6			
Surr: 2,4,6-Tribromophenol	200		200.0		97.7	27.8	112			
Surr: Nitrobenzene-d5	82		100.0		81.9	33	113			
Surr: 2-Fluorobiphenyl	71		100.0		70.8	26.6	107			
Surr: 4-Terphenyl-d14	99		100.0		99.3	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **lcs-44353**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44353**	RunNo: **59211**
Prep Date: **4/16/2019**	Analysis Date: **4/17/2019**	SeqNo: **1994241** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	56	10	100.0	0	56.0	38.1	100			
4-Chloro-3-methylphenol	150	10	200.0	0	74.2	40.7	109			
2-Chlorophenol	110	10	200.0	0	54.3	38.1	99.9			
1,4-Dichlorobenzene	28	10	100.0	0	27.6	38	95.2			S
2,4-Dinitrotoluene	58	10	100.0	0	58.3	55.1	96.7			
N-Nitrosodi-n-propylamine	74	10	100.0	0	73.6	40.6	111			
4-Nitrophenol	75	10	200.0	0	37.6	15	85.9			
Pentachlorophenol	110	20	200.0	0	55.0	36.5	88.7			
Phenol	68	10	200.0	0	34.2	15	86.5			
Pyrene	73	10	100.0	0	73.3	54.1	97.8			
1,2,4-Trichlorobenzene	35	10	100.0	0	35.2	23.6	102			
Surr: 2-Fluorophenol	83		200.0		41.4	15	101			
Surr: Phenol-d5	71		200.0		35.5	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		74.5	27.8	112			
Surr: Nitrobenzene-d5	58		100.0		58.1	33	113			
Surr: 2-Fluorobiphenyl	49		100.0		48.8	26.6	107			
Surr: 4-Terphenyl-d14	73		100.0		73.5	18.7	148			

Sample ID: **lcs-44353**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44353**	RunNo: **59344**
Prep Date: **4/16/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998499** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	59	10	100.0	0	58.6	32.2	94			
4-Chloro-3-methylphenol	150	10	200.0	0	75.4	37.7	101			
2-Chlorophenol	110	10	200.0	0	53.5	32.6	90.1			
1,4-Dichlorobenzene	27	10	100.0	0	27.3	30	87.2			S
2,4-Dinitrotoluene	61	10	100.0	0	61.3	35.9	85.8			
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.6	37.1	108			
4-Nitrophenol	85	10	200.0	0	42.4	22.4	86.6			
Pentachlorophenol	120	20	200.0	0	61.0	31.6	91			
Phenol	67	10	200.0	0	33.3	21.7	84.9			
Pyrene	69	10	100.0	0	68.9	46.3	103			
1,2,4-Trichlorobenzene	35	10	100.0	0	35.1	30.2	88.3			
Surr: 2-Fluorophenol	79		200.0		39.5	15	101			
Surr: Phenol-d5	68		200.0		34.1	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		77.9	27.8	112			
Surr: Nitrobenzene-d5	59		100.0		58.7	33	113			
Surr: 2-Fluorobiphenyl	49		100.0		48.7	26.6	107			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**

07-May-19

Client: Marathon

Project: Groundwater Sampling

Sample ID: **lcs-44353**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44353**	RunNo: **59344**
Prep Date: **4/16/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998499** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	74		100.0		73.6	18.7	148			

Sample ID: **lcs-44407**	SampType: **LCS4**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC**	Batch ID: **44407**	RunNo: **59344**
Prep Date: **4/17/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998500** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	44		100.0		44.3	15	101			
Surr: Phenol-d5	37		100.0		36.8	15	84.6			
Surr: 2,4,6-Tribromophenol	66		100.0		65.6	27.8	112			
Surr: Nitrobenzene-d5	65		100.0		65.5	33	113			
Surr: 2-Fluorobiphenyl	63		100.0		63.3	26.6	107			
Surr: 4-Terphenyl-d14	68		100.0		68.1	18.7	148			

Sample ID: **lcsd-44407**	SampType: **LCSD4**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC**	Batch ID: **44407**	RunNo: **59344**
Prep Date:	Analysis Date: **4/22/2019**	SeqNo: **1998501** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	46		100.0		46.2	15	101			
Surr: Phenol-d5	37		100.0		37.2	15	84.6			
Surr: 2,4,6-Tribromophenol	68		100.0		68.2	27.8	112			
Surr: Nitrobenzene-d5	65		100.0		65.0	33	113			
Surr: 2-Fluorobiphenyl	61		100.0		61.1	26.6	107			
Surr: 4-Terphenyl-d14	69		100.0		69.0	18.7	148			

Sample ID: **mb-44353**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44353**	RunNo: **59344**
Prep Date: **4/16/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998502** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **mb-44353**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44353**	RunNo: **59344**
Prep Date: **4/16/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998502** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	ND	10								
Benzoic acid	8.2	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **mb-44353**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **PBW**	Batch ID: **44353**	RunNo: **59344**							
Prep Date: **4/16/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998502**	Units: **µg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	110		200.0		54.6	15	101			
Surr: Phenol-d5	89		200.0		44.6	15	84.6			
Surr: 2,4,6-Tribromophenol	190		200.0		95.6	27.8	112			
Surr: Nitrobenzene-d5	81		100.0		80.8	33	113			
Surr: 2-Fluorobiphenyl	70		100.0		69.9	26.6	107			
Surr: 4-Terphenyl-d14	99		100.0		98.6	18.7	148			

Sample ID: **mb-44407**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **PBW**	Batch ID: **44407**	RunNo: **59344**							
Prep Date: **4/17/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998503**	Units: **%Rec**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	9.5		200.0		4.77	15	101			S
Surr: Phenol-d5	21		200.0		10.7	15	84.6			S
Surr: 2,4,6-Tribromophenol	20		200.0		10.0	27.8	112			S
Surr: Nitrobenzene-d5	58		100.0		58.2	33	113			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904535**
07-May-19

Client: Marathon
Project: Groundwater Sampling

Sample ID: **mb-44407**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**						
Client ID: **PBW**	Batch ID: **44407**	RunNo: **59344**						
Prep Date: **4/17/2019**	Analysis Date: **4/22/2019**	SeqNo: **1998503**	Units: **%Rec**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	50		100.0		50.0	26.6	107			
Surr: 4-Terphenyl-d14	52		100.0		51.6	18.7	148			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1904535** RcptNo: **1**

Received By: **Erin Melendrez** **4/9/2019 4:40:00 PM**

Completed By: **Leah Baca** **4/10/2019 7:42:13 AM** Leah SBaca

Reviewed By: DAD 4/10/19

Labeled by YG 4/10/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 22

(<2 or >12 unless noted)

Adjusted? NO

Checked by: YG 4/10/19

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	11.9	Good	Not Present			
2	6.8	Good	Not Present			

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Groundwater Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No 2 COOLERS

Sample Temperature: 11.7+0.2(CF)=11.9°C 6.6+0.2(CF)=6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1904535	Analysis Request: BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/9/19	0920	H_2O	NAPIS-2	40ml VOA-5	HCl	-001	X		X													
				1 Liter Amber - 2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
4/9/19	1400			4/9/19	
4/9/19	1640			4/9/19	1640

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Groundwater Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ X Yes ☐ No 2 COOLERS

Sample Temperature: 11.7 +0.2(CF) = 11.9°C 6.6 +0.2(CF) = 6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1904535	BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/9/19	0945 ~~0845~~ (Lab 4/9/19 per Tracy Payne)	H_2O	KA-3	40ml VOA-5	HCl	-002	X		X													
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/9/19	1400			4/9/19	1410
4/9/19	1635			4/9/19	1635

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Groundwater Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No 2 coolers

Sample Temperature: 11.7+0.2(CF)=11.9°C

6.6+0.2(CF)=6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/9/19	1015	H_2O	NAPIS-3	40ml VOA-5	HCl	1904535-003	X		X													
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber - 1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
4/9/19	1400			4/9/19	1410
4/9/19	1635			4/9/19	1635

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Groundwater Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No 2 COOLERS

Sample Temperature: 11.7 +0.2(CF) = 11.9°C

6.6 +0.2(CF) = 6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1904535	BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/9/19	1040	H_2O	EB01	40ml VOA-5	HCl	-004	X		X													
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
4/9/19	1240		Eugene Vigil	4/9/19	1410
4/9/19	1640	Eugene Vigil		4/9/19	1640

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No 2 coolers

Sample Temperature: 11.7+0.2(CF)=11.9°C 6.6+0.2(CF)=6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1904535	BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/9/19	1100	H_2O	FB01	40ml VOA-5	HCl	-005	X		X													
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
4/9/19	1400		Eugene Virgil	4/9/19	1410
4/9/19	1640			4/9/19	1640

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Groundwater Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No 2 COOLERS

Sample Temperature: 11.7°C +0.2(CF)=11.9°C
6.6 +0.2(CF)=6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
4/9/19	1145	H_2O	WEST LDU	40ml VOA-5	HCl	1904535-006	X		X													
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/9/19	1400			4/9/19	1410
4/9/19	1635			4/9/19	1635

Remarks:

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Groundwater Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No 2 COOLERS

Sample Temperature: 11.7+0.2(CF)=11.9°C

6.6+0.2(CF)=6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
4/9/19	1200	H_2O	EAST LDU	40ml VOA-5	HCl	1904535 -067	X		X													
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/9/19	1400		Eugene Vogis	4/9/19	14:10
4/9/19	1635			4/9/19	1635

Remarks:

Chain-of-Custody Record

Client: **Marathon Petroleum Company**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: BMoore1@Marathonpetroleum.com

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Groundwater Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No 2 COOLERS

Sample Temperature: 11.7+0.2(CF)=11.9°C 6.6+0.2(CF)=6.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/9/19	—	H_2O	DUP01	40ml VOA-5	HCl	1904535-008	X		X		X	LK 4/10/19 PEC		Tracy Payne								
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/9/19	1400		Eugene Vigil	4/9/19	1410
4/9/19	1640			4/9/19	1640

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 22, 2019

Cheryl Johnson
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: Semi Annual Ponds OrderNo.: 1904D77

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 4/29/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-12B
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:00:00 AM
Lab ID: 1904D77-001
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **JME**	
4,4´-DDD	ND	4.0	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
4,4´-DDE	ND	4.3	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
4,4´-DDT	ND	5.1	6.2		µg/L	10	5/6/2019 2:49:18 PM	44636
Aldrin	ND	4.2	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
alpha-BHC	ND	4.1	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
beta-BHC	ND	4.7	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Chlordane	ND	25	50		µg/L	10	5/6/2019 2:49:18 PM	44636
delta-BHC	ND	4.3	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Dieldrin	ND	4.2	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Endosulfan I	ND	4.2	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Endosulfan II	ND	4.4	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Endosulfan sulfate	ND	4.5	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Endrin	ND	5.7	6.2		µg/L	10	5/6/2019 2:49:18 PM	44636
Endrin aldehyde	ND	4.1	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
gamma-BHC	ND	4.2	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Heptachlor	ND	4.3	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Heptachlor epoxide	ND	4.4	5.0		µg/L	10	5/6/2019 2:49:18 PM	44636
Methoxychlor	ND	5.6	6.2		µg/L	10	5/6/2019 2:49:18 PM	44636
Toxaphene	ND	25	50		µg/L	10	5/6/2019 2:49:18 PM	44636
Surr: Decachlorobiphenyl	42.2	0	29.4-99.8		%Rec	10	5/6/2019 2:49:18 PM	44636
Surr: Tetrachloro-m-xylene	45.2	0	20.7-100		%Rec	10	5/6/2019 2:49:18 PM	44636
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	28	1.0	2.0	*	mg/L	20	5/1/2019 12:09:18 PM	R59582
Chloride	7200	500	500	*	mg/L	1000	4/30/2019 1:52:10 PM	R59554
Nitrogen, Nitrite (As N)	5.5	0.19	5.0	*	mg/L	50	4/30/2019 1:39:18 PM	R59554
Bromide	3.3	0.29	2.0		mg/L	20	4/30/2019 10:26:23 AM	R59554
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	4/30/2019 10:13:31 AM	R59554
Phosphorus, Orthophosphate (As P)	ND	0.12	2.5		mg/L	5	4/30/2019 10:13:31 AM	R59554
Sulfate	2800	54	500	*	mg/L	1000	4/30/2019 1:52:10 PM	R59554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.10	0.0025	0.020		mg/L	1	5/1/2019 4:00:44 PM	A59578
Barium	0.093	0.00065	0.0020		mg/L	1	5/1/2019 4:00:44 PM	A59578
Beryllium	0.00042	0.00028	0.0020	J	mg/L	1	5/1/2019 4:00:44 PM	A59578
Boron	1.1	0.023	0.20		mg/L	5	5/1/2019 4:09:23 PM	A59578
Cadmium	ND	0.00055	0.0020		mg/L	1	5/1/2019 4:00:44 PM	A59578
Calcium	200	0.31	5.0		mg/L	5	5/1/2019 4:09:23 PM	A59578
Chromium	ND	0.0015	0.0060		mg/L	1	5/1/2019 4:00:44 PM	A59578
Cobalt	ND	0.0031	0.0060		mg/L	1	5/1/2019 4:00:44 PM	A59578

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-12B
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:00:00 AM
Lab ID: 1904D77-001
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Copper	0.0046	0.0013	0.0060	J	mg/L	1	5/1/2019 4:00:44 PM	A59578
Iron	0.13	0.0087	0.020		mg/L	1	5/1/2019 4:00:44 PM	A59578
Magnesium	250	0.25	5.0		mg/L	5	5/1/2019 4:09:23 PM	A59578
Manganese	0.066	0.00029	0.0020	*	mg/L	1	5/1/2019 4:00:44 PM	A59578
Molybdenum	0.014	0.0067	0.0080		mg/L	1	5/1/2019 4:00:44 PM	A59578
Nickel	0.030	0.0040	0.010		mg/L	1	5/1/2019 4:00:44 PM	A59578
Potassium	810	1.6	10		mg/L	10	5/1/2019 4:11:29 PM	A59578
Silver	0.0050	0.00094	0.0050	J	mg/L	1	5/1/2019 4:00:44 PM	A59578
Sodium	4700	42	100		mg/L	100	5/1/2019 6:35:09 PM	A59578
Zinc	0.036	0.0023	0.010		mg/L	1	5/1/2019 4:00:44 PM	A59578
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.74	0.0025	0.020	*	mg/L	1	5/7/2019 5:32:47 PM	44753
Barium	0.097	0.00065	0.0020		mg/L	1	5/7/2019 5:32:47 PM	44753
Beryllium	0.00065	0.00028	0.0020	J	mg/L	1	5/7/2019 5:32:47 PM	44753
Boron	1.1	0.023	0.20		mg/L	5	5/7/2019 5:35:05 PM	44753
Cadmium	ND	0.00074	0.0020		mg/L	1	5/7/2019 5:32:47 PM	44753
Chromium	0.0028	0.0015	0.0060	J	mg/L	1	5/7/2019 5:32:47 PM	44753
Cobalt	ND	0.0031	0.0060		mg/L	1	5/7/2019 5:32:47 PM	44753
Copper	0.0041	0.0041	0.0060	J	mg/L	1	5/7/2019 5:32:47 PM	44753
Iron	0.49	0.0087	0.020	*	mg/L	1	5/7/2019 5:32:47 PM	44753
Manganese	0.11	0.00029	0.0020	*	mg/L	1	5/7/2019 5:32:47 PM	44753
Molybdenum	0.011	0.0067	0.0080		mg/L	1	5/7/2019 5:32:47 PM	44753
Nickel	0.030	0.0040	0.010		mg/L	1	5/7/2019 5:32:47 PM	44753
Silver	0.0044	0.0014	0.0050	J	mg/L	1	5/7/2019 5:32:47 PM	44753
Zinc	ND	0.0058	0.010		mg/L	1	5/7/2019 5:32:47 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.0024	0.0019	0.0050	J	mg/L	5	5/8/2019 2:21:56 PM	A59725
Arsenic	0.019	0.00050	0.0050	*	mg/L	5	5/8/2019 2:21:56 PM	A59725
Lead	ND	0.00027	0.0025		mg/L	5	5/8/2019 2:21:56 PM	A59725
Selenium	0.0052	0.00086	0.0050		mg/L	5	5/8/2019 2:21:56 PM	A59725
Thallium	ND	0.00024	0.0025		mg/L	5	5/8/2019 2:21:56 PM	A59725
Uranium	0.0019	0.00037	0.0025	J	mg/L	5	5/8/2019 2:21:56 PM	A59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/9/2019 4:48:23 PM	44753
Arsenic	0.021	0.0016	0.0050	*	mg/L	5	5/9/2019 4:48:23 PM	44753
Lead	0.00038	0.00027	0.0025	J	mg/L	5	5/9/2019 4:48:23 PM	44753
Selenium	0.0078	0.0024	0.0050		mg/L	5	5/9/2019 4:48:23 PM	44753
Thallium	ND	0.00026	0.0025		mg/L	5	5/9/2019 4:48:23 PM	44753

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-12B
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:00:00 AM
Lab ID: 1904D77-001
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: METALS							Analyst: **DBK**	
Uranium	0.0018	0.00042	0.0025	J	mg/L	5	5/14/2019 2:52:54 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/9/2019 1:09:16 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	38	2.0	2.0		mg/L	1	5/6/2019 11:18:00 AM	44652
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	<10	10.00	10.00	H	MPN/100	10	4/30/2019 5:07:00 PM	44607
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Acenaphthylene	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Aniline	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Anthracene	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Azobenzene	ND	34	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Benz(a)anthracene	ND	26	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Benzo(a)pyrene	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Benzoic acid	ND	32	100		µg/L	1	5/3/2019 6:38:29 PM	44610
Benzyl alcohol	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/3/2019 6:38:29 PM	44610
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Carbazole	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/3/2019 6:38:29 PM	44610
4-Chloroaniline	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2-Chloronaphthalene	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2-Chlorophenol	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Chrysene	ND	34	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Dibenzofuran	ND	34	50		µg/L	1	5/3/2019 6:38:29 PM	44610

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-12B
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:00:00 AM
Lab ID: 1904D77-001
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Diethyl phthalate	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Dimethyl phthalate	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/3/2019 6:38:29 PM	44610
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/3/2019 6:38:29 PM	44610
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/3/2019 6:38:29 PM	44610
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Fluoranthene	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Fluorene	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Hexachlorobenzene	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Hexachlorobutadiene	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Hexachloroethane	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Isophorone	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
1-Methylnaphthalene	ND	35	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2-Methylnaphthalene	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2-Methylphenol	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
3+4-Methylphenol	ND	27	50		µg/L	1	5/3/2019 6:38:29 PM	44610
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/3/2019 6:38:29 PM	44610
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/3/2019 6:38:29 PM	44610
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Naphthalene	ND	25	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2-Nitroaniline	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
3-Nitroaniline	ND	34	50		µg/L	1	5/3/2019 6:38:29 PM	44610
4-Nitroaniline	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Nitrobenzene	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2-Nitrophenol	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
4-Nitrophenol	ND	28	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Pentachlorophenol	ND	26	100		µg/L	1	5/3/2019 6:38:29 PM	44610
Phenanthrene	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Phenol	ND	30	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Pyrene	ND	33	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Pyridine	ND	27	50		µg/L	1	5/3/2019 6:38:29 PM	44610

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-12B
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:00:00 AM
Lab ID: 1904D77-001
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/3/2019 6:38:29 PM	44610
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/3/2019 6:38:29 PM	44610
Surr: 2-Fluorophenol	62.5	0	15-101		%Rec	1	5/3/2019 6:38:29 PM	44610
Surr: Phenol-d5	44.8	0	15-84.6		%Rec	1	5/3/2019 6:38:29 PM	44610
Surr: 2,4,6-Tribromophenol	64.5	0	27.8-112		%Rec	1	5/3/2019 6:38:29 PM	44610
Surr: Nitrobenzene-d5	82.4	0	33-113		%Rec	1	5/3/2019 6:38:29 PM	44610
Surr: 2-Fluorobiphenyl	55.8	0	26.6-107		%Rec	1	5/3/2019 6:38:29 PM	44610
Surr: 4-Terphenyl-d14	64.2	0	18.7-148		%Rec	1	5/3/2019 6:38:29 PM	44610
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Carbon disulfide	ND	4.5	100	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Chloromethane	ND	3.2	30	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-12B
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:00:00 AM
Lab ID: 1904D77-001
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 2:07:37 PM	B59810
Surr: 1,2-Dichloroethane-d4	109	0	70-130	D	%Rec	10	5/10/2019 2:07:37 PM	B59810
Surr: 4-Bromofluorobenzene	95.8	0	70-130	D	%Rec	10	5/10/2019 2:07:37 PM	B59810
Surr: Dibromofluoromethane	98.4	0	70-130	D	%Rec	10	5/10/2019 2:07:37 PM	B59810

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

Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-12B
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:00:00 AM
Lab ID: 1904D77-001
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	100	0	70-130	D	%Rec	10	5/10/2019 2:07:37 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	29000	50	50		µmhos/c	10	4/30/2019 5:13:05 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	8.63			*H	pH units	1	4/30/2019 12:11:46 PM	R59563

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-11
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:30:00 AM
Lab ID: 1904D77-002
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	24	1.0	2.0	*	mg/L	20	5/1/2019 12:21:43 PM	R59582
Chloride	76000	2500	2500	*	mg/L	5000	4/30/2019 2:17:53 PM	R59554
Nitrogen, Nitrite (As N)	52	0.76	20	*	mg/L	200	4/30/2019 2:05:02 PM	R59554
Bromide	24	2.9	20		mg/L	200	4/30/2019 2:05:02 PM	R59554
Nitrogen, Nitrate (As N)	ND	0.11	2.0		mg/L	20	4/30/2019 10:52:08 AM	R59554
Phosphorus, Orthophosphate (As P)	ND	0.46	10		mg/L	20	4/30/2019 10:52:08 AM	R59554
Sulfate	12000	270	2500	*	mg/L	5000	4/30/2019 2:17:53 PM	R59554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	5/1/2019 4:15:57 PM	A59578
Barium	0.19	0.0032	0.010		mg/L	5	5/1/2019 4:15:57 PM	A59578
Beryllium	0.0017	0.0014	0.010	J	mg/L	5	5/1/2019 4:15:57 PM	A59578
Boron	3.9	0.023	0.20		mg/L	5	5/1/2019 4:15:57 PM	A59578
Cadmium	ND	0.0028	0.010		mg/L	5	5/1/2019 4:15:57 PM	A59578
Calcium	760	0.62	10		mg/L	10	5/1/2019 4:18:09 PM	A59578
Chromium	ND	0.0077	0.030		mg/L	5	5/1/2019 4:15:57 PM	A59578
Cobalt	ND	0.015	0.030		mg/L	5	5/1/2019 4:15:57 PM	A59578
Copper	0.020	0.0065	0.030	J	mg/L	5	5/1/2019 4:15:57 PM	A59578
Iron	ND	0.044	0.10		mg/L	5	5/1/2019 4:15:57 PM	A59578
Magnesium	1200	1.0	20		mg/L	20	5/1/2019 6:45:12 PM	A59578
Manganese	0.41	0.0014	0.010	*	mg/L	5	5/1/2019 4:15:57 PM	A59578
Molybdenum	ND	0.034	0.040		mg/L	5	5/1/2019 4:15:57 PM	A59578
Nickel	0.13	0.020	0.050	*	mg/L	5	5/1/2019 4:15:57 PM	A59578
Potassium	1700	3.2	20		mg/L	20	5/1/2019 6:45:12 PM	A59578
Silver	0.018	0.0047	0.025	J	mg/L	5	5/1/2019 4:15:57 PM	A59578
Sodium	36000	420	1000		mg/L	1000	5/1/2019 6:47:17 PM	A59578
Zinc	0.032	0.011	0.050	J	mg/L	5	5/1/2019 4:15:57 PM	A59578
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.50	0.012	0.10	*	mg/L	5	5/7/2019 5:46:34 PM	44753
Barium	0.20	0.0032	0.010		mg/L	5	5/7/2019 5:46:34 PM	44753
Beryllium	0.0027	0.0014	0.010	J	mg/L	5	5/7/2019 5:46:34 PM	44753
Boron	4.0	0.023	0.20		mg/L	5	5/7/2019 5:46:34 PM	44753
Cadmium	ND	0.0037	0.010		mg/L	5	5/7/2019 5:46:34 PM	44753
Chromium	ND	0.0077	0.030		mg/L	5	5/8/2019 6:22:49 PM	44753
Cobalt	ND	0.015	0.030		mg/L	5	5/7/2019 5:46:34 PM	44753
Copper	0.020	0.020	0.030	J	mg/L	5	5/7/2019 5:46:34 PM	44753
Iron	0.19	0.044	0.10		mg/L	5	5/7/2019 5:46:34 PM	44753
Manganese	0.63	0.0014	0.010	*	mg/L	5	5/7/2019 5:46:34 PM	44753
Molybdenum	ND	0.034	0.040		mg/L	5	5/8/2019 6:22:49 PM	44753

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-11
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:30:00 AM
Lab ID: 1904D77-002
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.13	0.020	0.050	*	mg/L	5	5/7/2019 5:46:34 PM	44753
Silver	0.019	0.0071	0.025	J	mg/L	5	5/7/2019 5:46:34 PM	44753
Zinc	ND	0.029	0.050		mg/L	5	5/7/2019 5:46:34 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.020	0.019	0.050	J*	mg/L	50	5/8/2019 5:35:37 PM	D59725
Arsenic	0.11	0.0050	0.050	*	mg/L	50	5/8/2019 5:35:37 PM	D59725
Lead	ND	0.0027	0.025		mg/L	50	5/8/2019 5:35:37 PM	D59725
Selenium	0.011	0.0086	0.050	J	mg/L	50	5/8/2019 5:35:37 PM	D59725
Thallium	ND	0.0024	0.025		mg/L	50	5/8/2019 5:35:37 PM	D59725
Uranium	0.0059	0.0037	0.025	J	mg/L	50	5/8/2019 5:35:37 PM	D59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.0090	0.0078	0.020	J*	mg/L	20	5/9/2019 6:07:19 PM	44753
Arsenic	0.12	0.0062	0.020	*	mg/L	20	5/9/2019 6:07:19 PM	44753
Lead	0.0011	0.0011	0.010	J	mg/L	20	5/9/2019 6:07:19 PM	44753
Selenium	0.017	0.0096	0.020	J	mg/L	20	5/9/2019 6:07:19 PM	44753
Thallium	ND	0.0010	0.010		mg/L	20	5/9/2019 6:07:19 PM	44753
Uranium	0.0045	0.0017	0.010	J	mg/L	20	5/14/2019 3:03:55 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/9/2019 1:15:58 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	17	2.0	2.0		mg/L	1	5/6/2019 11:18:00 AM	44652
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	<10	10.00	10.00		MPN/100	10	4/30/2019 5:07:00 PM	44607
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Acenaphthylene	ND	6.2	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Aniline	ND	6.2	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Anthracene	ND	5.7	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Azobenzene	ND	6.7	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Benzoic acid	ND	6.3	20		µg/L	1	5/3/2019 7:08:27 PM	44610
Benzyl alcohol	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
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Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:30:00 AM
Lab ID: 1904D77-002
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/3/2019 7:08:27 PM	44610
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Carbazole	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/3/2019 7:08:27 PM	44610
4-Chloroaniline	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2-Chlorophenol	ND	5.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Chrysene	ND	6.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Dibenzofuran	ND	6.9	10		µg/L	1	5/3/2019 7:08:27 PM	44610
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Diethyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/3/2019 7:08:27 PM	44610
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/3/2019 7:08:27 PM	44610
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/3/2019 7:08:27 PM	44610
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/3/2019 7:08:27 PM	44610
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Fluoranthene	ND	5.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Fluorene	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Hexachloroethane	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Isophorone	ND	6.2	10		µg/L	1	5/3/2019 7:08:27 PM	44610
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-11
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:30:00 AM
Lab ID: 1904D77-002
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	5/3/2019 7:08:27 PM	44610
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/3/2019 7:08:27 PM	44610
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/3/2019 7:08:27 PM	44610
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/3/2019 7:08:27 PM	44610
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Naphthalene	ND	5.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2-Nitroaniline	ND	5.9	10		µg/L	1	5/3/2019 7:08:27 PM	44610
3-Nitroaniline	ND	6.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
4-Nitroaniline	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Nitrobenzene	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2-Nitrophenol	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
4-Nitrophenol	ND	5.6	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Pentachlorophenol	ND	5.3	20		µg/L	1	5/3/2019 7:08:27 PM	44610
Phenanthrene	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Phenol	ND	6.0	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Pyrene	ND	6.5	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Pyridine	ND	5.4	10		µg/L	1	5/3/2019 7:08:27 PM	44610
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/3/2019 7:08:27 PM	44610
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/3/2019 7:08:27 PM	44610
Surr: 2-Fluorophenol	40.7	0	15-101		%Rec	1	5/3/2019 7:08:27 PM	44610
Surr: Phenol-d5	46.3	0	15-84.6		%Rec	1	5/3/2019 7:08:27 PM	44610
Surr: 2,4,6-Tribromophenol	42.9	0	27.8-112		%Rec	1	5/3/2019 7:08:27 PM	44610
Surr: Nitrobenzene-d5	61.4	0	33-113		%Rec	1	5/3/2019 7:08:27 PM	44610
Surr: 2-Fluorobiphenyl	38.3	0	26.6-107		%Rec	1	5/3/2019 7:08:27 PM	44610
Surr: 4-Terphenyl-d14	49.4	0	18.7-148		%Rec	1	5/3/2019 7:08:27 PM	44610
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 2:36:56 PM	B59810

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-11
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:30:00 AM
Lab ID: 1904D77-002
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Carbon disulfide	ND	4.5	100	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Chloromethane	4.6	3.2	30	JD	µg/L	10	5/10/2019 2:36:56 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810

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Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 2:36:56 PM	B59810
Surr: 1,2-Dichloroethane-d4	108	0	70-130	D	%Rec	10	5/10/2019 2:36:56 PM	B59810
Surr: 4-Bromofluorobenzene	91.3	0	70-130	D	%Rec	10	5/10/2019 2:36:56 PM	B59810
Surr: Dibromofluoromethane	99.6	0	70-130	D	%Rec	10	5/10/2019 2:36:56 PM	B59810
Surr: Toluene-d8	96.4	0	70-130	D	%Rec	10	5/10/2019 2:36:56 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	190000	250	250		µmhos/c	50	4/30/2019 5:16:03 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.95			H	pH units	1	4/30/2019 12:15:49 PM	R59563

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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-7
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:50:00 AM
Lab ID: 1904D77-003
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	25	1.0	2.0	*	mg/L	20	5/1/2019 12:58:57 PM	R59582
Chloride	88000	2500	2500	*	mg/L	5000	4/30/2019 3:09:21 PM	R59554
Nitrogen, Nitrite (As N)	52	0.76	20	*	mg/L	200	4/30/2019 2:56:29 PM	R59554
Bromide	25	2.9	20		mg/L	200	4/30/2019 2:56:29 PM	R59554
Nitrogen, Nitrate (As N)	ND	0.11	2.0		mg/L	20	4/30/2019 11:17:51 AM	R59554
Phosphorus, Orthophosphate (As P)	ND	0.46	10		mg/L	20	4/30/2019 11:17:51 AM	R59554
Sulfate	14000	270	2500	*	mg/L	5000	4/30/2019 3:09:21 PM	R59554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	5/1/2019 4:22:43 PM	A59578
Barium	0.19	0.0032	0.010		mg/L	5	5/1/2019 4:22:43 PM	A59578
Beryllium	0.0018	0.0014	0.010	J	mg/L	5	5/1/2019 4:22:43 PM	A59578
Boron	3.9	0.023	0.20		mg/L	5	5/1/2019 4:22:43 PM	A59578
Cadmium	ND	0.0028	0.010		mg/L	5	5/1/2019 4:22:43 PM	A59578
Calcium	760	0.62	10		mg/L	10	5/1/2019 4:24:56 PM	A59578
Chromium	ND	0.0077	0.030		mg/L	5	5/1/2019 4:22:43 PM	A59578
Cobalt	ND	0.015	0.030		mg/L	5	5/1/2019 4:22:43 PM	A59578
Copper	0.012	0.0065	0.030	J	mg/L	5	5/1/2019 4:22:43 PM	A59578
Iron	ND	0.044	0.10		mg/L	5	5/1/2019 4:22:43 PM	A59578
Magnesium	1200	1.0	20		mg/L	20	5/1/2019 6:49:22 PM	A59578
Manganese	0.46	0.0014	0.010	*	mg/L	5	5/1/2019 4:22:43 PM	A59578
Molybdenum	ND	0.034	0.040		mg/L	5	5/1/2019 4:22:43 PM	A59578
Nickel	0.11	0.020	0.050	*	mg/L	5	5/1/2019 4:22:43 PM	A59578
Potassium	1700	3.2	20		mg/L	20	5/1/2019 6:49:22 PM	A59578
Silver	0.016	0.0047	0.025	J	mg/L	5	5/1/2019 4:22:43 PM	A59578
Sodium	33000	210	500		mg/L	500	5/1/2019 6:51:25 PM	A59578
Zinc	0.030	0.011	0.050	J	mg/L	5	5/1/2019 4:22:43 PM	A59578
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.21	0.012	0.10	*	mg/L	5	5/7/2019 5:51:23 PM	44753
Barium	0.18	0.0032	0.010		mg/L	5	5/7/2019 5:51:23 PM	44753
Beryllium	0.0028	0.0014	0.010	J	mg/L	5	5/7/2019 5:51:23 PM	44753
Boron	3.7	0.023	0.20		mg/L	5	5/7/2019 5:51:23 PM	44753
Cadmium	ND	0.0037	0.010		mg/L	5	5/7/2019 5:51:23 PM	44753
Chromium	ND	0.0077	0.030		mg/L	5	5/8/2019 6:31:55 PM	44753
Cobalt	ND	0.015	0.030		mg/L	5	5/7/2019 5:51:23 PM	44753
Copper	ND	0.020	0.030		mg/L	5	5/7/2019 5:51:23 PM	44753
Iron	0.094	0.044	0.10	J	mg/L	5	5/7/2019 5:51:23 PM	44753
Manganese	0.59	0.0014	0.010	*	mg/L	5	5/7/2019 5:51:23 PM	44753
Molybdenum	ND	0.034	0.040		mg/L	5	5/8/2019 6:31:55 PM	44753

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Lab ID: 1904D77-003
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.12	0.020	0.050	*	mg/L	5	5/7/2019 5:51:23 PM	44753
Silver	0.017	0.0071	0.025	J	mg/L	5	5/7/2019 5:51:23 PM	44753
Zinc	ND	0.029	0.050		mg/L	5	5/7/2019 5:51:23 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.019	0.050		mg/L	50	5/8/2019 5:38:20 PM	D59725
Arsenic	0.11	0.0050	0.050	*	mg/L	50	5/8/2019 5:38:20 PM	D59725
Lead	ND	0.0011	0.010		mg/L	20	5/8/2019 5:11:10 PM	D59725
Selenium	0.0089	0.0086	0.050	J	mg/L	50	5/8/2019 5:38:20 PM	D59725
Thallium	ND	0.00097	0.010		mg/L	20	5/8/2019 5:11:10 PM	D59725
Uranium	0.0048	0.0015	0.010	J	mg/L	20	5/8/2019 5:11:10 PM	D59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0078	0.020		mg/L	20	5/9/2019 6:09:31 PM	44753
Arsenic	0.11	0.0062	0.020	*	mg/L	20	5/9/2019 6:09:31 PM	44753
Lead	ND	0.0011	0.010		mg/L	20	5/9/2019 6:09:31 PM	44753
Selenium	0.012	0.0096	0.020	J	mg/L	20	5/9/2019 6:09:31 PM	44753
Thallium	ND	0.0010	0.010		mg/L	20	5/9/2019 6:09:31 PM	44753
Uranium	0.0048	0.0017	0.010	J	mg/L	20	5/14/2019 3:06:06 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/9/2019 1:22:48 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	15	2.0	2.0		mg/L	1	5/6/2019 11:18:00 AM	44652
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	<10	10.00	10.00		MPN/100	10	4/30/2019 5:07:00 PM	44607
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Acenaphthylene	ND	6.2	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Aniline	ND	6.2	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Anthracene	ND	5.7	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Azobenzene	ND	6.7	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Benzoic acid	ND	6.3	20		µg/L	1	5/3/2019 7:38:31 PM	44610
Benzyl alcohol	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610

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Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/3/2019 7:38:31 PM	44610
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Carbazole	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/3/2019 7:38:31 PM	44610
4-Chloroaniline	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2-Chlorophenol	ND	5.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Chrysene	ND	6.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Dibenzofuran	ND	6.9	10		µg/L	1	5/3/2019 7:38:31 PM	44610
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Diethyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/3/2019 7:38:31 PM	44610
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/3/2019 7:38:31 PM	44610
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/3/2019 7:38:31 PM	44610
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/3/2019 7:38:31 PM	44610
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Fluoranthene	ND	5.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Fluorene	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Hexachloroethane	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Isophorone	ND	6.2	10		µg/L	1	5/3/2019 7:38:31 PM	44610
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610

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Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	5/3/2019 7:38:31 PM	44610
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/3/2019 7:38:31 PM	44610
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/3/2019 7:38:31 PM	44610
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/3/2019 7:38:31 PM	44610
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Naphthalene	ND	5.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2-Nitroaniline	ND	5.9	10		µg/L	1	5/3/2019 7:38:31 PM	44610
3-Nitroaniline	ND	6.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
4-Nitroaniline	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Nitrobenzene	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2-Nitrophenol	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
4-Nitrophenol	ND	5.6	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Pentachlorophenol	ND	5.3	20		µg/L	1	5/3/2019 7:38:31 PM	44610
Phenanthrene	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Phenol	ND	6.0	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Pyrene	ND	6.5	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Pyridine	ND	5.4	10		µg/L	1	5/3/2019 7:38:31 PM	44610
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/3/2019 7:38:31 PM	44610
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/3/2019 7:38:31 PM	44610
Surr: 2-Fluorophenol	35.1	0	15-101		%Rec	1	5/3/2019 7:38:31 PM	44610
Surr: Phenol-d5	39.9	0	15-84.6		%Rec	1	5/3/2019 7:38:31 PM	44610
Surr: 2,4,6-Tribromophenol	33.9	0	27.8-112		%Rec	1	5/3/2019 7:38:31 PM	44610
Surr: Nitrobenzene-d5	58.0	0	33-113		%Rec	1	5/3/2019 7:38:31 PM	44610
Surr: 2-Fluorobiphenyl	36.6	0	26.6-107		%Rec	1	5/3/2019 7:38:31 PM	44610
Surr: 4-Terphenyl-d14	48.8	0	18.7-148		%Rec	1	5/3/2019 7:38:31 PM	44610
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Acetone	16	12	100	JD	µg/L	10	5/10/2019 3:06:21 PM	B59810

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Carbon disulfide	ND	4.5	100	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Chloromethane	4.7	3.2	30	JD	µg/L	10	5/10/2019 3:06:21 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-7
Project: Semi Annual Ponds
Collection Date: 4/29/2019 9:50:00 AM
Lab ID: 1904D77-003
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 3:06:21 PM	B59810
Surr: 1,2-Dichloroethane-d4	101	0	70-130	D	%Rec	10	5/10/2019 3:06:21 PM	B59810
Surr: 4-Bromofluorobenzene	92.7	0	70-130	D	%Rec	10	5/10/2019 3:06:21 PM	B59810
Surr: Dibromofluoromethane	95.6	0	70-130	D	%Rec	10	5/10/2019 3:06:21 PM	B59810
Surr: Toluene-d8	95.6	0	70-130	D	%Rec	10	5/10/2019 3:06:21 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	180000	250	250		µmhos/c	50	4/30/2019 5:19:04 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.93			H	pH units	1	4/30/2019 12:20:00 PM	R59563

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-8
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:30:00 AM
Lab ID: 1904D77-004
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	26	1.0	2.0	*	mg/L	20	5/1/2019 1:11:22 PM	R59582
Chloride	62000	2500	2500	*	mg/L	5000	4/30/2019 3:35:05 PM	R59554
Nitrogen, Nitrite (As N)	53	0.76	20	*	mg/L	200	4/30/2019 3:22:13 PM	R59554
Bromide	26	2.9	20		mg/L	200	4/30/2019 3:22:13 PM	R59554
Nitrogen, Nitrate (As N)	ND	0.11	2.0		mg/L	20	4/30/2019 11:43:34 AM	R59554
Phosphorus, Orthophosphate (As P)	ND	0.46	10		mg/L	20	4/30/2019 11:43:34 AM	R59554
Sulfate	10000	270	2500	*	mg/L	5000	4/30/2019 3:35:05 PM	R59554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	5/1/2019 4:29:35 PM	A59578
Barium	0.19	0.0032	0.010		mg/L	5	5/1/2019 4:29:35 PM	A59578
Beryllium	0.0020	0.0014	0.010	J	mg/L	5	5/1/2019 4:29:35 PM	A59578
Boron	3.8	0.023	0.20		mg/L	5	5/1/2019 4:29:35 PM	A59578
Cadmium	ND	0.0028	0.010		mg/L	5	5/1/2019 4:29:35 PM	A59578
Calcium	760	0.62	10		mg/L	10	5/1/2019 4:40:33 PM	A59578
Chromium	ND	0.0077	0.030		mg/L	5	5/1/2019 4:29:35 PM	A59578
Cobalt	ND	0.015	0.030		mg/L	5	5/1/2019 4:29:35 PM	A59578
Copper	0.014	0.0065	0.030	J	mg/L	5	5/1/2019 4:29:35 PM	A59578
Iron	ND	0.044	0.10		mg/L	5	5/1/2019 4:29:35 PM	A59578
Magnesium	1200	1.0	20		mg/L	20	5/1/2019 6:53:30 PM	A59578
Manganese	0.45	0.0014	0.010	*	mg/L	5	5/1/2019 4:29:35 PM	A59578
Molybdenum	ND	0.034	0.040		mg/L	5	5/1/2019 4:29:35 PM	A59578
Nickel	0.12	0.020	0.050	*	mg/L	5	5/1/2019 4:29:35 PM	A59578
Potassium	1700	3.2	20		mg/L	20	5/1/2019 6:53:30 PM	A59578
Silver	0.019	0.0047	0.025	J	mg/L	5	5/1/2019 4:29:35 PM	A59578
Sodium	28000	210	500		mg/L	500	5/1/2019 6:55:33 PM	A59578
Zinc	0.019	0.011	0.050	J	mg/L	5	5/1/2019 4:29:35 PM	A59578
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.20	0.012	0.10	*	mg/L	5	5/7/2019 5:56:13 PM	44753
Barium	0.19	0.0032	0.010		mg/L	5	5/7/2019 5:56:13 PM	44753
Beryllium	0.0031	0.0014	0.010	J	mg/L	5	5/7/2019 5:56:13 PM	44753
Boron	3.7	0.023	0.20		mg/L	5	5/7/2019 5:56:13 PM	44753
Cadmium	ND	0.0037	0.010		mg/L	5	5/7/2019 5:56:13 PM	44753
Chromium	ND	0.0077	0.030		mg/L	5	5/8/2019 6:34:14 PM	44753
Cobalt	ND	0.015	0.030		mg/L	5	5/7/2019 5:56:13 PM	44753
Copper	0.022	0.020	0.030	J	mg/L	5	5/7/2019 5:56:13 PM	44753
Iron	0.13	0.044	0.10		mg/L	5	5/7/2019 5:56:13 PM	44753
Manganese	0.61	0.0014	0.010	*	mg/L	5	5/7/2019 5:56:13 PM	44753
Molybdenum	ND	0.034	0.040		mg/L	5	5/8/2019 6:34:14 PM	44753

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-8
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:30:00 AM
Lab ID: 1904D77-004
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.11	0.020	0.050	*	mg/L	5	5/7/2019 5:56:13 PM	44753
Silver	0.017	0.0071	0.025	J	mg/L	5	5/7/2019 5:56:13 PM	44753
Zinc	ND	0.029	0.050		mg/L	5	5/7/2019 5:56:13 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.019	0.050		mg/L	50	5/8/2019 5:41:02 PM	D59725
Arsenic	0.11	0.0050	0.050	*	mg/L	50	5/8/2019 5:41:02 PM	D59725
Lead	ND	0.0011	0.010		mg/L	20	5/8/2019 5:13:53 PM	D59725
Selenium	0.014	0.0086	0.050	J	mg/L	50	5/8/2019 5:41:02 PM	D59725
Thallium	ND	0.00097	0.010		mg/L	20	5/8/2019 5:13:53 PM	D59725
Uranium	0.0050	0.0015	0.010	J	mg/L	20	5/8/2019 5:13:53 PM	D59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0078	0.020		mg/L	20	5/9/2019 6:11:43 PM	44753
Arsenic	0.12	0.0062	0.020	*	mg/L	20	5/9/2019 6:11:43 PM	44753
Lead	ND	0.0011	0.010		mg/L	20	5/9/2019 6:11:43 PM	44753
Selenium	0.010	0.0096	0.020	J	mg/L	20	5/9/2019 6:11:43 PM	44753
Thallium	ND	0.0010	0.010		mg/L	20	5/9/2019 6:11:43 PM	44753
Uranium	0.0046	0.0017	0.010	J	mg/L	20	5/14/2019 3:08:18 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/9/2019 1:25:02 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	20	2.0	2.0		mg/L	1	5/6/2019 11:18:00 AM	44652
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	<10	10.00	10.00		MPN/100	10	4/30/2019 5:07:00 PM	44607
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Acenaphthylene	ND	6.2	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Aniline	ND	6.2	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Anthracene	ND	5.7	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Azobenzene	ND	6.7	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Benzoic acid	ND	6.3	20		µg/L	1	5/3/2019 8:08:31 PM	44610
Benzyl alcohol	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610

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

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-8
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:30:00 AM
Lab ID: 1904D77-004
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/3/2019 8:08:31 PM	44610
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Carbazole	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/3/2019 8:08:31 PM	44610
4-Chloroaniline	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2-Chlorophenol	ND	5.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Chrysene	ND	6.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Dibenzofuran	ND	6.9	10		µg/L	1	5/3/2019 8:08:31 PM	44610
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Diethyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/3/2019 8:08:31 PM	44610
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/3/2019 8:08:31 PM	44610
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/3/2019 8:08:31 PM	44610
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/3/2019 8:08:31 PM	44610
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Fluoranthene	ND	5.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Fluorene	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Hexachloroethane	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Isophorone	ND	6.2	10		µg/L	1	5/3/2019 8:08:31 PM	44610
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-8
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:30:00 AM
Lab ID: 1904D77-004
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	5/3/2019 8:08:31 PM	44610
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/3/2019 8:08:31 PM	44610
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/3/2019 8:08:31 PM	44610
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/3/2019 8:08:31 PM	44610
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Naphthalene	ND	5.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2-Nitroaniline	ND	5.9	10		µg/L	1	5/3/2019 8:08:31 PM	44610
3-Nitroaniline	ND	6.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
4-Nitroaniline	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Nitrobenzene	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2-Nitrophenol	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
4-Nitrophenol	ND	5.6	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Pentachlorophenol	ND	5.3	20		µg/L	1	5/3/2019 8:08:31 PM	44610
Phenanthrene	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Phenol	ND	6.0	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Pyrene	ND	6.5	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Pyridine	ND	5.4	10		µg/L	1	5/3/2019 8:08:31 PM	44610
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/3/2019 8:08:31 PM	44610
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/3/2019 8:08:31 PM	44610
Surr: 2-Fluorophenol	36.5	0	15-101		%Rec	1	5/3/2019 8:08:31 PM	44610
Surr: Phenol-d5	41.1	0	15-84.6		%Rec	1	5/3/2019 8:08:31 PM	44610
Surr: 2,4,6-Tribromophenol	33.3	0	27.8-112		%Rec	1	5/3/2019 8:08:31 PM	44610
Surr: Nitrobenzene-d5	59.8	0	33-113		%Rec	1	5/3/2019 8:08:31 PM	44610
Surr: 2-Fluorobiphenyl	35.0	0	26.6-107		%Rec	1	5/3/2019 8:08:31 PM	44610
Surr: 4-Terphenyl-d14	47.8	0	18.7-148		%Rec	1	5/3/2019 8:08:31 PM	44610
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 3:35:47 PM	B59810

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-8
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:30:00 AM
Lab ID: 1904D77-004
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Carbon disulfide	ND	4.5	100	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Chloromethane	4.2	3.2	30	JD	µg/L	10	5/10/2019 3:35:47 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-8
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:30:00 AM
Lab ID: 1904D77-004
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 3:35:47 PM	B59810
Surr: 1,2-Dichloroethane-d4	106	0	70-130	D	%Rec	10	5/10/2019 3:35:47 PM	B59810
Surr: 4-Bromofluorobenzene	96.0	0	70-130	D	%Rec	10	5/10/2019 3:35:47 PM	B59810
Surr: Dibromofluoromethane	100	0	70-130	D	%Rec	10	5/10/2019 3:35:47 PM	B59810
Surr: Toluene-d8	95.4	0	70-130	D	%Rec	10	5/10/2019 3:35:47 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	180000	250	250		µmhos/c	50	4/30/2019 5:22:02 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.93			H	pH units	1	4/30/2019 12:24:09 PM	R59563

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:36:00 AM
Lab ID: 1904D77-005
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	27	1.0	2.0	*	mg/L	20	5/1/2019 1:23:46 PM	R59582
Chloride	75000	2500	2500	*	mg/L	5000	4/30/2019 4:00:48 PM	R59554
Nitrogen, Nitrite (As N)	52	0.76	20	*	mg/L	200	4/30/2019 3:47:57 PM	R59554
Bromide	27	2.9	20		mg/L	200	4/30/2019 3:47:57 PM	R59554
Nitrogen, Nitrate (As N)	ND	0.11	2.0		mg/L	20	4/30/2019 12:35:00 PM	R59554
Phosphorus, Orthophosphate (As P)	ND	0.46	10		mg/L	20	4/30/2019 12:35:00 PM	R59554
Sulfate	12000	270	2500	*	mg/L	5000	4/30/2019 4:00:48 PM	R59554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	5/1/2019 4:45:23 PM	A59578
Barium	0.19	0.0032	0.010		mg/L	5	5/1/2019 4:45:23 PM	A59578
Beryllium	0.0020	0.0014	0.010	J	mg/L	5	5/1/2019 4:45:23 PM	A59578
Boron	3.8	0.023	0.20		mg/L	5	5/1/2019 4:45:23 PM	A59578
Cadmium	ND	0.0028	0.010		mg/L	5	5/1/2019 4:45:23 PM	A59578
Calcium	750	0.62	10		mg/L	10	5/1/2019 4:47:41 PM	A59578
Chromium	0.010	0.0077	0.030	J	mg/L	5	5/2/2019 4:30:30 PM	A59599
Cobalt	ND	0.015	0.030		mg/L	5	5/1/2019 4:45:23 PM	A59578
Copper	0.013	0.0065	0.030	J	mg/L	5	5/1/2019 4:45:23 PM	A59578
Iron	ND	0.044	0.10		mg/L	5	5/1/2019 4:45:23 PM	A59578
Magnesium	1200	1.0	20		mg/L	20	5/1/2019 6:57:38 PM	A59578
Manganese	0.45	0.0014	0.010	*	mg/L	5	5/1/2019 4:45:23 PM	A59578
Molybdenum	ND	0.034	0.040		mg/L	5	5/2/2019 4:30:30 PM	A59599
Nickel	0.10	0.020	0.050	*	mg/L	5	5/1/2019 4:45:23 PM	A59578
Potassium	1700	3.2	20		mg/L	20	5/1/2019 6:57:38 PM	A59578
Silver	0.018	0.0047	0.025	J	mg/L	5	5/1/2019 4:45:23 PM	A59578
Sodium	29000	210	500		mg/L	500	5/1/2019 6:59:41 PM	A59578
Zinc	0.022	0.011	0.050	J	mg/L	5	5/1/2019 4:45:23 PM	A59578
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.21	0.012	0.10	*	mg/L	5	5/7/2019 6:01:02 PM	44753
Barium	0.18	0.0032	0.010		mg/L	5	5/7/2019 6:01:02 PM	44753
Beryllium	0.0033	0.0014	0.010	J	mg/L	5	5/7/2019 6:01:02 PM	44753
Boron	3.6	0.023	0.20		mg/L	5	5/7/2019 6:01:02 PM	44753
Cadmium	ND	0.0037	0.010		mg/L	5	5/7/2019 6:01:02 PM	44753
Chromium	ND	0.0077	0.030		mg/L	5	5/8/2019 6:36:34 PM	44753
Cobalt	ND	0.015	0.030		mg/L	5	5/7/2019 6:01:02 PM	44753
Copper	ND	0.020	0.030		mg/L	5	5/7/2019 6:01:02 PM	44753
Iron	0.088	0.044	0.10	J	mg/L	5	5/7/2019 6:01:02 PM	44753
Manganese	0.59	0.0014	0.010	*	mg/L	5	5/7/2019 6:01:02 PM	44753
Molybdenum	ND	0.034	0.040		mg/L	5	5/8/2019 6:36:34 PM	44753

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:36:00 AM
Lab ID: 1904D77-005
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.11	0.020	0.050	*	mg/L	5	5/7/2019 6:01:02 PM	44753
Silver	0.019	0.0071	0.025	J	mg/L	5	5/7/2019 6:01:02 PM	44753
Zinc	ND	0.029	0.050		mg/L	5	5/7/2019 6:01:02 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.019	0.050		mg/L	50	5/8/2019 5:43:45 PM	D59725
Arsenic	0.12	0.0020	0.020	*	mg/L	20	5/8/2019 5:16:35 PM	D59725
Lead	ND	0.0011	0.010		mg/L	20	5/8/2019 5:16:35 PM	D59725
Selenium	0.0078	0.0034	0.020	J	mg/L	20	5/8/2019 5:16:35 PM	D59725
Thallium	ND	0.00097	0.010		mg/L	20	5/8/2019 5:16:35 PM	D59725
Uranium	0.0046	0.0015	0.010	J	mg/L	20	5/8/2019 5:16:35 PM	D59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0078	0.020		mg/L	20	5/9/2019 6:13:54 PM	44753
Arsenic	0.11	0.0062	0.020	*	mg/L	20	5/9/2019 6:13:54 PM	44753
Lead	ND	0.0011	0.010		mg/L	20	5/9/2019 6:13:54 PM	44753
Selenium	0.0098	0.0096	0.020	J	mg/L	20	5/9/2019 6:13:54 PM	44753
Thallium	ND	0.0010	0.010		mg/L	20	5/9/2019 6:13:54 PM	44753
Uranium	0.0044	0.0017	0.010	J	mg/L	20	5/14/2019 3:10:29 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/9/2019 1:27:16 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	18	2.0	2.0		mg/L	1	5/6/2019 11:18:00 AM	44652
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	<10	10.00	10.00		MPN/100	10	4/30/2019 5:07:00 PM	44607
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Acenaphthylene	ND	6.2	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Aniline	ND	6.2	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Anthracene	ND	5.7	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Azobenzene	ND	6.7	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Benzoic acid	ND	6.3	20		µg/L	1	5/3/2019 8:38:23 PM	44610
Benzyl alcohol	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:36:00 AM
Lab ID: 1904D77-005
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/3/2019 8:38:23 PM	44610
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Carbazole	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/3/2019 8:38:23 PM	44610
4-Chloroaniline	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2-Chlorophenol	ND	5.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Chrysene	ND	6.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Dibenzofuran	ND	6.9	10		µg/L	1	5/3/2019 8:38:23 PM	44610
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Diethyl phthalate	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/3/2019 8:38:23 PM	44610
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/3/2019 8:38:23 PM	44610
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/3/2019 8:38:23 PM	44610
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/3/2019 8:38:23 PM	44610
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Fluoranthene	ND	5.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Fluorene	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Hexachloroethane	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Isophorone	ND	6.2	10		µg/L	1	5/3/2019 8:38:23 PM	44610
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:36:00 AM
Lab ID: 1904D77-005
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	6.3	10		µg/L	1	5/3/2019 8:38:23 PM	44610
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/3/2019 8:38:23 PM	44610
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/3/2019 8:38:23 PM	44610
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/3/2019 8:38:23 PM	44610
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Naphthalene	ND	5.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2-Nitroaniline	ND	5.9	10		µg/L	1	5/3/2019 8:38:23 PM	44610
3-Nitroaniline	ND	6.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
4-Nitroaniline	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Nitrobenzene	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2-Nitrophenol	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
4-Nitrophenol	ND	5.6	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Pentachlorophenol	ND	5.3	20		µg/L	1	5/3/2019 8:38:23 PM	44610
Phenanthrene	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Phenol	ND	6.0	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Pyrene	ND	6.5	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Pyridine	ND	5.4	10		µg/L	1	5/3/2019 8:38:23 PM	44610
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/3/2019 8:38:23 PM	44610
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/3/2019 8:38:23 PM	44610
Surr: 2-Fluorophenol	76.1	0	15-101		%Rec	1	5/3/2019 8:38:23 PM	44610
Surr: Phenol-d5	77.8	0	15-84.6		%Rec	1	5/3/2019 8:38:23 PM	44610
Surr: 2,4,6-Tribromophenol	65.8	0	27.8-112		%Rec	1	5/3/2019 8:38:23 PM	44610
Surr: Nitrobenzene-d5	115	0	33-113	S	%Rec	1	5/3/2019 8:38:23 PM	44610
Surr: 2-Fluorobiphenyl	73.0	0	26.6-107		%Rec	1	5/3/2019 8:38:23 PM	44610
Surr: 4-Terphenyl-d14	74.1	0	18.7-148		%Rec	1	5/3/2019 8:38:23 PM	44610
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Acetone	17	12	100	JD	µg/L	10	5/10/2019 4:04:58 PM	B59810

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:36:00 AM
Lab ID: 1904D77-005
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Carbon disulfide	ND	4.5	100	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Chloromethane	5.0	3.2	30	JD	µg/L	10	5/10/2019 4:04:58 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: Semi Annual Ponds
Collection Date: 4/29/2019 10:36:00 AM
Lab ID: 1904D77-005
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 4:04:58 PM	B59810
Surr: 1,2-Dichloroethane-d4	110	0	70-130	D	%Rec	10	5/10/2019 4:04:58 PM	B59810
Surr: 4-Bromofluorobenzene	95.2	0	70-130	D	%Rec	10	5/10/2019 4:04:58 PM	B59810
Surr: Dibromofluoromethane	101	0	70-130	D	%Rec	10	5/10/2019 4:04:58 PM	B59810
Surr: Toluene-d8	99.0	0	70-130	D	%Rec	10	5/10/2019 4:04:58 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	180000	250	250		µmhos/c	50	4/30/2019 5:24:59 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.93			H	pH units	1	4/30/2019 12:28:20 PM	R59563

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-9
Project: Semi Annual Ponds
Collection Date: 4/29/2019 11:30:00 AM
Lab ID: 1904D77-006
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	25	1.0	2.0	*	mg/L	20	5/1/2019 1:36:11 PM	R59582
Chloride	55000	2500	2500	*	mg/L	5000	4/30/2019 4:26:33 PM	R59554
Nitrogen, Nitrite (As N)	39	0.76	20	*	mg/L	200	4/30/2019 4:13:41 PM	R59554
Bromide	12	1.8	10		mg/L	100	5/1/2019 10:05:00 PM	A59582
Nitrogen, Nitrate (As N)	ND	0.11	2.0		mg/L	20	4/30/2019 1:00:44 PM	R59554
Phosphorus, Orthophosphate (As P)	ND	0.46	10		mg/L	20	4/30/2019 1:00:44 PM	R59554
Sulfate	6100	270	2500	*	mg/L	5000	4/30/2019 4:26:33 PM	R59554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	5/1/2019 4:52:25 PM	A59578
Barium	0.18	0.0032	0.010		mg/L	5	5/1/2019 4:52:25 PM	A59578
Beryllium	0.0019	0.0014	0.010	J	mg/L	5	5/1/2019 4:52:25 PM	A59578
Boron	2.4	0.023	0.20		mg/L	5	5/1/2019 4:52:25 PM	A59578
Cadmium	ND	0.0028	0.010		mg/L	5	5/1/2019 4:52:25 PM	A59578
Calcium	710	0.62	10		mg/L	10	5/1/2019 4:54:43 PM	A59578
Chromium	ND	0.0077	0.030		mg/L	5	5/2/2019 4:41:49 PM	A59599
Cobalt	ND	0.015	0.030		mg/L	5	5/1/2019 4:52:25 PM	A59578
Copper	0.018	0.0065	0.030	J	mg/L	5	5/1/2019 4:52:25 PM	A59578
Iron	0.076	0.044	0.10	J	mg/L	5	5/1/2019 4:52:25 PM	A59578
Magnesium	890	0.50	10		mg/L	10	5/1/2019 4:54:43 PM	A59578
Manganese	0.34	0.0014	0.010	*	mg/L	5	5/1/2019 4:52:25 PM	A59578
Molybdenum	ND	0.034	0.040		mg/L	5	5/2/2019 4:41:49 PM	A59599
Nickel	0.075	0.020	0.050		mg/L	5	5/1/2019 4:52:25 PM	A59578
Potassium	1200	3.2	20		mg/L	20	5/1/2019 7:01:46 PM	A59578
Silver	0.017	0.0047	0.025	J	mg/L	5	5/1/2019 4:52:25 PM	A59578
Sodium	19000	210	500		mg/L	500	5/1/2019 7:03:49 PM	A59578
Zinc	0.041	0.011	0.050	J	mg/L	5	5/1/2019 4:52:25 PM	A59578
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.30	0.012	0.10	*	mg/L	5	5/7/2019 6:05:49 PM	44753
Barium	0.17	0.0032	0.010		mg/L	5	5/7/2019 6:05:49 PM	44753
Beryllium	0.0029	0.0014	0.010	J	mg/L	5	5/7/2019 6:05:49 PM	44753
Boron	2.2	0.023	0.20		mg/L	5	5/7/2019 6:05:49 PM	44753
Cadmium	ND	0.0037	0.010		mg/L	5	5/7/2019 6:05:49 PM	44753
Chromium	ND	0.0077	0.030		mg/L	5	5/8/2019 6:38:54 PM	44753
Cobalt	ND	0.015	0.030		mg/L	5	5/7/2019 6:05:49 PM	44753
Copper	0.022	0.020	0.030	J	mg/L	5	5/7/2019 6:05:49 PM	44753
Iron	0.18	0.044	0.10		mg/L	5	5/7/2019 6:05:49 PM	44753
Manganese	0.38	0.0014	0.010	*	mg/L	5	5/7/2019 6:05:49 PM	44753
Molybdenum	ND	0.034	0.040		mg/L	5	5/8/2019 6:38:54 PM	44753

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-9
Project: Semi Annual Ponds
Collection Date: 4/29/2019 11:30:00 AM
Lab ID: 1904D77-006
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.068	0.020	0.050		mg/L	5	5/7/2019 6:05:49 PM	44753
Silver	0.016	0.0071	0.025	J	mg/L	5	5/7/2019 6:05:49 PM	44753
Zinc	ND	0.029	0.050		mg/L	5	5/7/2019 6:05:49 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0078	0.020		mg/L	20	5/8/2019 5:19:18 PM	D59725
Arsenic	0.079	0.0020	0.020	*	mg/L	20	5/8/2019 5:19:18 PM	D59725
Lead	ND	0.0011	0.010		mg/L	20	5/8/2019 5:19:18 PM	D59725
Selenium	0.0035	0.0034	0.020	J	mg/L	20	5/8/2019 5:19:18 PM	D59725
Thallium	ND	0.00097	0.010		mg/L	20	5/8/2019 5:19:18 PM	D59725
Uranium	0.0053	0.0015	0.010	J	mg/L	20	5/8/2019 5:19:18 PM	D59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0078	0.020		mg/L	20	5/9/2019 6:16:07 PM	44753
Arsenic	0.082	0.0016	0.0050	*	mg/L	5	5/9/2019 5:11:54 PM	44753
Lead	ND	0.0011	0.010		mg/L	20	5/9/2019 6:16:07 PM	44753
Selenium	0.011	0.0024	0.0050		mg/L	5	5/9/2019 5:11:54 PM	44753
Thallium	ND	0.0010	0.010		mg/L	20	5/9/2019 6:16:07 PM	44753
Uranium	0.0055	0.0017	0.010	J	mg/L	20	5/14/2019 3:12:41 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/9/2019 1:29:31 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	90	2.0	2.0		mg/L	1	5/6/2019 11:18:00 AM	44652
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	<10	10.00	10.00		MPN/100	10	4/30/2019 5:07:00 PM	44607
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Acenaphthylene	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Aniline	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Anthracene	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Azobenzene	ND	34	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Benz(a)anthracene	ND	26	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Benzo(a)pyrene	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Benzoic acid	ND	32	100		µg/L	1	5/3/2019 9:08:10 PM	44610
Benzyl alcohol	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-9
Project: Semi Annual Ponds
Collection Date: 4/29/2019 11:30:00 AM
Lab ID: 1904D77-006
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/3/2019 9:08:10 PM	44610
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Carbazole	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/3/2019 9:08:10 PM	44610
4-Chloroaniline	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2-Chloronaphthalene	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2-Chlorophenol	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Chrysene	ND	34	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Dibenzofuran	ND	34	50		µg/L	1	5/3/2019 9:08:10 PM	44610
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Diethyl phthalate	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Dimethyl phthalate	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/3/2019 9:08:10 PM	44610
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/3/2019 9:08:10 PM	44610
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/3/2019 9:08:10 PM	44610
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Fluoranthene	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Fluorene	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Hexachlorobenzene	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Hexachlorobutadiene	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Hexachloroethane	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Isophorone	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
1-Methylnaphthalene	ND	35	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2-Methylnaphthalene	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-9
Project: Semi Annual Ponds
Collection Date: 4/29/2019 11:30:00 AM
Lab ID: 1904D77-006
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
3+4-Methylphenol	ND	27	50		µg/L	1	5/3/2019 9:08:10 PM	44610
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/3/2019 9:08:10 PM	44610
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/3/2019 9:08:10 PM	44610
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Naphthalene	ND	25	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2-Nitroaniline	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
3-Nitroaniline	ND	34	50		µg/L	1	5/3/2019 9:08:10 PM	44610
4-Nitroaniline	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Nitrobenzene	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2-Nitrophenol	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
4-Nitrophenol	ND	28	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Pentachlorophenol	ND	26	100		µg/L	1	5/3/2019 9:08:10 PM	44610
Phenanthrene	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Phenol	ND	30	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Pyrene	ND	33	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Pyridine	ND	27	50		µg/L	1	5/3/2019 9:08:10 PM	44610
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/3/2019 9:08:10 PM	44610
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/3/2019 9:08:10 PM	44610
Surr: 2-Fluorophenol	45.1	0	15-101		%Rec	1	5/3/2019 9:08:10 PM	44610
Surr: Phenol-d5	77.3	0	15-84.6		%Rec	1	5/3/2019 9:08:10 PM	44610
Surr: 2,4,6-Tribromophenol	28.9	0	27.8-112		%Rec	1	5/3/2019 9:08:10 PM	44610
Surr: Nitrobenzene-d5	164	0	33-113	S	%Rec	1	5/3/2019 9:08:10 PM	44610
Surr: 2-Fluorobiphenyl	112	0	26.6-107	S	%Rec	1	5/3/2019 9:08:10 PM	44610
Surr: 4-Terphenyl-d14	135	0	18.7-148		%Rec	1	5/3/2019 9:08:10 PM	44610
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 4:34:01 PM	B59810

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-9
Project: Semi Annual Ponds
Collection Date: 4/29/2019 11:30:00 AM
Lab ID: 1904D77-006
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Carbon disulfide	ND	4.5	100	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Chloromethane	5.2	3.2	30	JD	µg/L	10	5/10/2019 4:34:01 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-9
Project: Semi Annual Ponds
Collection Date: 4/29/2019 11:30:00 AM
Lab ID: 1904D77-006
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 4:34:01 PM	B59810
Surr: 1,2-Dichloroethane-d4	107	0	70-130	D	%Rec	10	5/10/2019 4:34:01 PM	B59810
Surr: 4-Bromofluorobenzene	99.2	0	70-130	D	%Rec	10	5/10/2019 4:34:01 PM	B59810
Surr: Dibromofluoromethane	100	0	70-130	D	%Rec	10	5/10/2019 4:34:01 PM	B59810
Surr: Toluene-d8	96.5	0	70-130	D	%Rec	10	5/10/2019 4:34:01 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	140000	250	250		µmhos/c	50	4/30/2019 5:27:55 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.98			H	pH units	1	4/30/2019 12:32:35 PM	R59563

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-6
Project: Semi Annual Ponds
Collection Date: 4/29/2019 12:00:00 PM
Lab ID: 1904D77-007
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	33	1.0	2.0	*	mg/L	20	5/1/2019 1:48:36 PM	R59582
Chloride	4100	250	250	*	mg/L	500	4/30/2019 4:39:25 PM	R59554
Nitrogen, Nitrite (As N)	2.6	0.076	2.0	*	mg/L	20	4/30/2019 1:26:27 PM	R59554
Bromide	1.5	0.073	0.50		mg/L	5	4/30/2019 1:13:36 PM	R59554
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	4/30/2019 1:13:36 PM	R59554
Phosphorus, Orthophosphate (As P)	ND	0.12	2.5		mg/L	5	4/30/2019 1:13:36 PM	R59554
Sulfate	1400	27	250	*	mg/L	500	4/30/2019 4:39:25 PM	R59554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.029	0.0025	0.020		mg/L	1	5/1/2019 4:56:59 PM	A59578
Barium	0.20	0.00065	0.0020		mg/L	1	5/1/2019 4:56:59 PM	A59578
Beryllium	0.00057	0.00028	0.0020	J	mg/L	1	5/1/2019 4:56:59 PM	A59578
Boron	0.48	0.0045	0.040		mg/L	1	5/1/2019 4:56:59 PM	A59578
Cadmium	ND	0.00055	0.0020		mg/L	1	5/1/2019 4:56:59 PM	A59578
Calcium	370	0.31	5.0		mg/L	5	5/1/2019 4:59:19 PM	A59578
Chromium	ND	0.0015	0.0060		mg/L	1	5/2/2019 4:44:09 PM	A59599
Cobalt	ND	0.0031	0.0060		mg/L	1	5/1/2019 4:56:59 PM	A59578
Copper	ND	0.0013	0.0060		mg/L	1	5/1/2019 4:56:59 PM	A59578
Iron	0.097	0.0087	0.020		mg/L	1	5/1/2019 4:56:59 PM	A59578
Magnesium	120	0.25	5.0		mg/L	5	5/1/2019 4:59:19 PM	A59578
Manganese	0.46	0.00029	0.0020	*	mg/L	1	5/1/2019 4:56:59 PM	A59578
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/2/2019 4:44:09 PM	A59599
Nickel	0.011	0.0040	0.010		mg/L	1	5/1/2019 4:56:59 PM	A59578
Potassium	320	0.81	5.0		mg/L	5	5/1/2019 4:59:19 PM	A59578
Silver	0.0071	0.00094	0.0050		mg/L	1	5/1/2019 4:56:59 PM	A59578
Sodium	2300	42	100		mg/L	100	5/1/2019 7:13:54 PM	A59578
Zinc	0.016	0.0023	0.010		mg/L	1	5/1/2019 4:56:59 PM	A59578
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.50	0.0025	0.020	*	mg/L	1	5/7/2019 6:18:21 PM	44753
Barium	0.19	0.00065	0.0020		mg/L	1	5/7/2019 6:18:21 PM	44753
Beryllium	0.00057	0.00028	0.0020	J	mg/L	1	5/7/2019 6:18:21 PM	44753
Boron	0.48	0.0045	0.040		mg/L	1	5/7/2019 6:18:21 PM	44753
Cadmium	ND	0.00074	0.0020		mg/L	1	5/7/2019 6:18:21 PM	44753
Chromium	0.0025	0.0015	0.0060	J	mg/L	1	5/8/2019 6:41:13 PM	44753
Cobalt	ND	0.0031	0.0060		mg/L	1	5/7/2019 6:18:21 PM	44753
Copper	ND	0.0041	0.0060		mg/L	1	5/7/2019 6:18:21 PM	44753
Iron	0.32	0.0087	0.020	*	mg/L	1	5/7/2019 6:18:21 PM	44753
Manganese	0.47	0.00029	0.0020	*	mg/L	1	5/7/2019 6:18:21 PM	44753
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/8/2019 6:41:13 PM	44753

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-6
Project: Semi Annual Ponds
Collection Date: 4/29/2019 12:00:00 PM
Lab ID: 1904D77-007
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.013	0.0040	0.010		mg/L	1	5/7/2019 6:18:21 PM	44753
Silver	0.0071	0.0014	0.0050		mg/L	1	5/7/2019 6:18:21 PM	44753
Zinc	ND	0.0058	0.010		mg/L	1	5/8/2019 6:41:13 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/8/2019 2:43:37 PM	A59725
Arsenic	0.013	0.00050	0.0050	*	mg/L	5	5/8/2019 2:43:37 PM	A59725
Lead	ND	0.00027	0.0025		mg/L	5	5/8/2019 2:43:37 PM	A59725
Selenium	0.0050	0.00086	0.0050		mg/L	5	5/8/2019 2:43:37 PM	A59725
Thallium	ND	0.00024	0.0025		mg/L	5	5/8/2019 2:43:37 PM	A59725
Uranium	0.0019	0.00037	0.0025	J	mg/L	5	5/8/2019 5:22:01 PM	D59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/9/2019 5:14:05 PM	44753
Arsenic	0.014	0.0016	0.0050	*	mg/L	5	5/9/2019 5:14:05 PM	44753
Lead	0.00047	0.00027	0.0025	J	mg/L	5	5/9/2019 5:14:05 PM	44753
Selenium	0.0040	0.0024	0.0050	J	mg/L	5	5/9/2019 5:14:05 PM	44753
Thallium	ND	0.00026	0.0025		mg/L	5	5/9/2019 5:14:05 PM	44753
Uranium	0.0023	0.00042	0.0025	J	mg/L	5	5/14/2019 3:14:53 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000064	0.000038	0.00020	J	mg/L	1	5/9/2019 1:31:46 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	54	2.0	2.0		mg/L	1	5/6/2019 11:18:00 AM	44652
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	20	10.00	10.00		MPN/100	10	4/30/2019 5:07:00 PM	44607
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Acenaphthylene	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Aniline	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Anthracene	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Azobenzene	ND	34	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Benz(a)anthracene	ND	26	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Benzo(a)pyrene	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Benzoic acid	37	32	100	J	µg/L	1	5/3/2019 9:37:56 PM	44610
Benzyl alcohol	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-6
Project: Semi Annual Ponds
Collection Date: 4/29/2019 12:00:00 PM
Lab ID: 1904D77-007
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/3/2019 9:37:56 PM	44610
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Carbazole	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/3/2019 9:37:56 PM	44610
4-Chloroaniline	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2-Chloronaphthalene	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2-Chlorophenol	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Chrysene	ND	34	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Dibenzofuran	ND	34	50		µg/L	1	5/3/2019 9:37:56 PM	44610
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Diethyl phthalate	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Dimethyl phthalate	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/3/2019 9:37:56 PM	44610
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/3/2019 9:37:56 PM	44610
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/3/2019 9:37:56 PM	44610
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Fluoranthene	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Fluorene	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Hexachlorobenzene	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Hexachlorobutadiene	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Hexachloroethane	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Isophorone	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
1-Methylnaphthalene	ND	35	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2-Methylnaphthalene	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-6
Project: Semi Annual Ponds
Collection Date: 4/29/2019 12:00:00 PM
Lab ID: 1904D77-007
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylphenol	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
3+4-Methylphenol	ND	27	50		µg/L	1	5/3/2019 9:37:56 PM	44610
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/3/2019 9:37:56 PM	44610
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/3/2019 9:37:56 PM	44610
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Naphthalene	ND	25	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2-Nitroaniline	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
3-Nitroaniline	ND	34	50		µg/L	1	5/3/2019 9:37:56 PM	44610
4-Nitroaniline	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Nitrobenzene	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2-Nitrophenol	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
4-Nitrophenol	ND	28	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Pentachlorophenol	ND	26	100		µg/L	1	5/3/2019 9:37:56 PM	44610
Phenanthrene	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Phenol	ND	30	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Pyrene	ND	33	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Pyridine	ND	27	50		µg/L	1	5/3/2019 9:37:56 PM	44610
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/3/2019 9:37:56 PM	44610
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/3/2019 9:37:56 PM	44610
Surr: 2-Fluorophenol	55.8	0	15-101		%Rec	1	5/3/2019 9:37:56 PM	44610
Surr: Phenol-d5	43.3	0	15-84.6		%Rec	1	5/3/2019 9:37:56 PM	44610
Surr: 2,4,6-Tribromophenol	77.3	0	27.8-112		%Rec	1	5/3/2019 9:37:56 PM	44610
Surr: Nitrobenzene-d5	77.4	0	33-113		%Rec	1	5/3/2019 9:37:56 PM	44610
Surr: 2-Fluorobiphenyl	56.7	0	26.6-107		%Rec	1	5/3/2019 9:37:56 PM	44610
Surr: 4-Terphenyl-d14	72.0	0	18.7-148		%Rec	1	5/3/2019 9:37:56 PM	44610
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Toluene	ND	3.5	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Naphthalene	ND	2.8	20	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Acetone	ND	12	100	D	µg/L	10	5/13/2019 11:41:30 AM	R59844

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-6
Project: Semi Annual Ponds
Collection Date: 4/29/2019 12:00:00 PM
Lab ID: 1904D77-007
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Bromobenzene	ND	2.4	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Bromoform	ND	2.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Bromomethane	ND	2.7	30	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
2-Butanone	ND	21	100	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Carbon disulfide	13	4.5	100	JD	µg/L	10	5/13/2019 11:41:30 AM	R59844
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Chloroethane	ND	1.8	20	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Chloroform	ND	1.2	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Chloromethane	ND	3.2	30	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Dibromomethane	ND	2.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
2-Hexanone	ND	15	100	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Styrene	ND	1.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: EP-6
Project: Semi Annual Ponds
Collection Date: 4/29/2019 12:00:00 PM
Lab ID: 1904D77-007
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/13/2019 11:41:30 AM	R59844
Surr: 1,2-Dichloroethane-d4	101	0	70-130	D	%Rec	10	5/13/2019 11:41:30 AM	R59844
Surr: 4-Bromofluorobenzene	94.3	0	70-130	D	%Rec	10	5/13/2019 11:41:30 AM	R59844
Surr: Dibromofluoromethane	91.5	0	70-130	D	%Rec	10	5/13/2019 11:41:30 AM	R59844
Surr: Toluene-d8	95.0	0	70-130	D	%Rec	10	5/13/2019 11:41:30 AM	R59844
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	17000	50	50		µmhos/c	10	4/30/2019 5:30:50 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	8.01			H	pH units	1	4/30/2019 12:36:45 PM	R59563

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: Semi Annual Ponds
Collection Date:
Lab ID: 1904D77-008
Matrix: TRIP BLANK
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Acetone	ND	1.2	10		µg/L	1	5/10/2019 12:11:16 PM	B59810
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 12:11:16 PM	B59810
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 12:11:16 PM	B59810
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 12:11:16 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: Semi Annual Ponds
Collection Date:
Lab ID: 1904D77-008
Matrix: TRIP BLANK
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 12:11:16 PM	B59810
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 12:11:16 PM	B59810
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 12:11:16 PM	B59810
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 12:11:16 PM	B59810
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/10/2019 12:11:16 PM	B59810
Surr: 4-Bromofluorobenzene	93.5	0	70-130		%Rec	1	5/10/2019 12:11:16 PM	B59810
Surr: Dibromofluoromethane	95.3	0	70-130		%Rec	1	5/10/2019 12:11:16 PM	B59810
Surr: Toluene-d8	94.7	0	70-130		%Rec	1	5/10/2019 12:11:16 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: Semi Annual Ponds
Collection Date: 4/29/2019 7:00:00 AM
Lab ID: 1904D77-009
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	0.18	0.17	1.0	J	µg/L	1	5/10/2019 12:40:20 PM	B59810
Toluene	0.49	0.35	1.0	J	µg/L	1	5/10/2019 12:40:20 PM	B59810
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Acetone	18	1.2	10		µg/L	1	5/10/2019 12:40:20 PM	B59810
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
2-Butanone	24	2.1	10		µg/L	1	5/10/2019 12:40:20 PM	B59810
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 12:40:20 PM	B59810
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 12:40:20 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: Semi Annual Ponds
Collection Date: 4/29/2019 7:00:00 AM
Lab ID: 1904D77-009
Matrix: AQUEOUS
Received Date: 4/29/2019 3:44:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
2-Hexanone	1.8	1.5	10	J	µg/L	1	5/10/2019 12:40:20 PM	B59810
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 12:40:20 PM	B59810
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 12:40:20 PM	B59810
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 12:40:20 PM	B59810
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	5/10/2019 12:40:20 PM	B59810
Surr: 4-Bromofluorobenzene	94.6	0	70-130		%Rec	1	5/10/2019 12:40:20 PM	B59810
Surr: Dibromofluoromethane	95.3	0	70-130		%Rec	1	5/10/2019 12:40:20 PM	B59810
Surr: Toluene-d8	96.9	0	70-130		%Rec	1	5/10/2019 12:40:20 PM	B59810

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

Qualifiers:

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

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	839		10.0	1	05/04/2019 12:50	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2160		100	10	05/04/2019 12:50	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2370		100	10	05/04/2019 12:50	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1850		100	10	05/04/2019 12:51	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2410		100	10	05/04/2019 12:51	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1630		100	10	05/04/2019 12:51	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	393		10.0	1	05/04/2019 12:51	WG1276037

QUALITY CONTROL SUMMARY

L1094088-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3408194-1 05/04/19 12:50

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1094277-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1094277-01 05/04/19 12:52 • (DUP) R3408194-3 05/04/19 12:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	12.0	10.2	1	15.8		20

L1094329-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1094329-03 05/04/19 12:53 • (DUP) R3408194-4 05/04/19 12:53

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	15.5	15.6	1	0.861		20

Laboratory Control Sample (LCS)

(LCS) R3408194-2 05/04/19 12:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
COD	222	205	92.5	90.0-110	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007482** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0051	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007484** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0096	0.020	0.01000	0	95.7	50	150			J
Barium	0.0019	0.0020	0.002000	0	95.4	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	102	50	150			
Boron	0.040	0.040	0.04000	0	99.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	93.3	50	150			J
Calcium	0.49	1.0	0.5000	0	98.8	50	150			J
Chromium	0.0051	0.0060	0.006000	0	85.6	50	150			J
Cobalt	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0043	0.0060	0.006000	0	71.1	50	150			J
Iron	0.020	0.020	0.02000	0	102	50	150			
Magnesium	0.49	1.0	0.5000	0	98.6	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0078	0.0080	0.008000	0	97.5	50	150			J
Nickel	0.0065	0.010	0.005000	0	129	50	150			J
Potassium	0.53	1.0	0.5000	0	106	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007484** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0049	0.0050	0.005000	0	98.7	50	150			J
Sodium	0.55	1.0	0.5000	0	110	50	150			J
Zinc	0.0057	0.010	0.005000	0	113	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007486** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	111	85	115			
Barium	0.49	0.0020	0.5000	0	98.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Calcium	47	1.0	50.00	0	94.8	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.9	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Magnesium	47	1.0	50.00	0	94.2	85	115			
Manganese	0.50	0.0020	0.5000	0	99.7	85	115			
Molybdenum	0.50	0.0080	0.5000	0	100	85	115			
Nickel	0.49	0.010	0.5000	0	98.6	85	115			
Potassium	47	1.0	50.00	0	93.4	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	47	1.0	50.00	0	93.1	85	115			
Zinc	0.50	0.010	0.5000	0	99.9	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008538** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Molybdenum	ND	0.0080								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**							
Client ID: **BatchQC**	Batch ID: **A59599**	RunNo: **59599**							
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008540**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0065	0.0060	0.006000	0	109	50	150			
Molybdenum	0.0078	0.0080	0.008000	0	97.5	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**							
Client ID: **LCSW**	Batch ID: **A59599**	RunNo: **59599**							
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008542**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Molybdenum	0.51	0.0080	0.5000	0	102	85	115			

Sample ID: **MB-44753**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**							
Client ID: **PBW**	Batch ID: **44753**	RunNo: **59705**							
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2013012**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0042	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	0.00047	0.0020								J
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-44753**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**							
Client ID: **BatchQC**	Batch ID: **44753**	RunNo: **59705**							
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2013017**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.015	0.020	0.01000	0	149	50	150			J
Barium	0.0020	0.0020	0.002000	0	102	50	150			
Beryllium	0.0022	0.0020	0.002000	0	108	50	150			
Boron	0.042	0.040	0.04000	0	105	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **LLLCS-44753** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **44753** RunNo: **59705**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0019	0.0020	0.002000	0	94.3	50	150			J
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0065	0.0060	0.006000	0	109	50	150			
Copper	0.0071	0.0060	0.006000	0	118	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Manganese	0.0024	0.0020	0.002000	0	118	50	150			
Molybdenum	0.0079	0.0080	0.008000	0	98.6	50	150			J
Nickel	0.0057	0.010	0.005000	0	114	50	150			J
Silver	0.0056	0.0050	0.005000	0	112	50	150			

Sample ID: **LCS-44753** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **44753** RunNo: **59705**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013019** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Beryllium	0.51	0.0020	0.5000	0	102	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.3	85	115			
Cobalt	0.49	0.0060	0.5000	0	97.8	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Molybdenum	0.50	0.0080	0.5000	0	99.9	85	115			
Nickel	0.49	0.010	0.5000	0	97.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID: **LLLCS-44753** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **44753** RunNo: **59705**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.014	0.010	0.01000	0	136	50	150			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB-44753**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44753**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014380** Units: **mg/L**

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

Sample ID: **LCS-44753**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **44753**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014382** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID: **LLLCS-44753**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44753**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014383** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.013	0.010	0.01000	0	126	50	150			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007483** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0051	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007485** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0096	0.020	0.01000	0	95.7	50	150			J
Barium	0.0019	0.0020	0.002000	0	95.4	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	102	50	150			
Boron	0.040	0.040	0.04000	0	99.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	93.3	50	150			J
Calcium	0.49	1.0	0.5000	0	98.8	50	150			J
Chromium	0.0051	0.0060	0.006000	0	85.6	50	150			J
Cobalt	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0043	0.0060	0.006000	0	71.1	50	150			J
Iron	0.020	0.020	0.02000	0	102	50	150			
Magnesium	0.49	1.0	0.5000	0	98.6	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0078	0.0080	0.008000	0	97.5	50	150			J
Nickel	0.0065	0.010	0.005000	0	129	50	150			J
Potassium	0.53	1.0	0.5000	0	106	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007485** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0049	0.0050	0.005000	0	98.7	50	150			J
Sodium	0.55	1.0	0.5000	0	110	50	150			J
Zinc	0.0057	0.010	0.005000	0	113	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59578**	RunNo: **59578**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007487** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	111	85	115			
Barium	0.49	0.0020	0.5000	0	98.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Calcium	47	1.0	50.00	0	94.8	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.9	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Magnesium	47	1.0	50.00	0	94.2	85	115			
Manganese	0.50	0.0020	0.5000	0	99.7	85	115			
Molybdenum	0.50	0.0080	0.5000	0	100	85	115			
Nickel	0.49	0.010	0.5000	0	98.6	85	115			
Potassium	47	1.0	50.00	0	93.4	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	47	1.0	50.00	0	93.1	85	115			
Zinc	0.50	0.010	0.5000	0	99.9	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008539** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Molybdenum	ND	0.0080								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008541** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0065	0.0060	0.006000	0	109	50	150			
Molybdenum	0.0078	0.0080	0.008000	0	97.5	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008543** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Molybdenum	0.51	0.0080	0.5000	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB-44753** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **44753** RunNo: **59761**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015800** Units: **mg/L**

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

Sample ID: **MSLLLCS-44753** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **44753** RunNo: **59761**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015802** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	111	50	150			
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.9	50	150			J
Selenium	0.00065	0.0010	0.001000	0	65.0	50	150			J
Thallium	0.00042	0.00050	0.0005000	0	84.6	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	88.0	50	150			J

Sample ID: **MSLCS-44753** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **44753** RunNo: **59761**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015804** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	106	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.0	85	115			
Lead	0.012	0.00050	0.01250	0	97.2	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			
Thallium	0.012	0.00050	0.01250	0	95.9	85	115			
Uranium	0.011	0.00050	0.01250	0	90.4	85	115			

Sample ID: **1904D77-001FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **EP-12B** Batch ID: **44753** RunNo: **59761**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.031	0.0050	0.02500	0	126	70	130			
Arsenic	0.045	0.0050	0.02500	0.02072	98.6	70	130			
Lead	0.012	0.0025	0.01250	0.0003787	90.9	70	130			
Selenium	0.028	0.0050	0.02500	0.007755	80.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **1904D77-001FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**

Client ID: **EP-12B** Batch ID: **44753** RunNo: **59761**

Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.011	0.0025	0.01250	0	89.9	70	130			

Sample ID: **1904D77-001FMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**

Client ID: **EP-12B** Batch ID: **44753** RunNo: **59761**

Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.030	0.0050	0.02500	0	120	70	130	4.97	20	
Arsenic	0.049	0.0050	0.02500	0.02072	115	70	130	8.64	20	
Lead	0.012	0.0025	0.01250	0.0003787	92.1	70	130	1.33	20	
Selenium	0.030	0.0050	0.02500	0.007755	88.5	70	130	6.96	20	
Thallium	0.011	0.0025	0.01250	0	91.8	70	130	2.10	20	

Sample ID: **1904D77-001FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**

Client ID: **EP-12B** Batch ID: **44753** RunNo: **59867**

Prep Date: **5/6/2019** Analysis Date: **5/14/2019** SeqNo: **2019633** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.014	0.0025	0.01250	0.001792	101	70	130			

Sample ID: **1904D77-001FMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**

Client ID: **EP-12B** Batch ID: **44753** RunNo: **59867**

Prep Date: **5/6/2019** Analysis Date: **5/14/2019** SeqNo: **2019634** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.014	0.0025	0.01250	0.001792	99.3	70	130	1.85	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014059** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00079	0.0010	0.001000	0	79.4	50	150			J
Arsenic	0.00093	0.0010	0.001000	0	93.2	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.8	50	150			J
Selenium	0.00087	0.0010	0.001000	0	87.4	50	150			J
Thallium	0.00045	0.00050	0.0005000	0	90.0	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.5	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.5	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.3	85	115			
Lead	0.012	0.00050	0.01250	0	99.6	85	115			
Selenium	0.025	0.0010	0.02500	0	98.1	85	115			
Thallium	0.012	0.00050	0.01250	0	98.0	85	115			
Uranium	0.012	0.00050	0.01250	0	97.8	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014124** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014124** Units: **mg/L**

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

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00091	0.0010	0.001000	0	91.1	50	150			J
Arsenic	0.00097	0.0010	0.001000	0	96.7	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00088	0.0010	0.001000	0	87.6	50	150			J
Thallium	0.00048	0.00050	0.0005000	0	95.8	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	103	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014126** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.6	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Thallium	0.013	0.00050	0.01250	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **LCSD**	SampType: **LCSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSS02**	Batch ID: **D59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014127** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.6	85	115	0.0389	20	
Arsenic	0.025	0.0010	0.02500	0	101	85	115	0.564	20	
Lead	0.013	0.00050	0.01250	0	101	85	115	1.75	20	
Selenium	0.026	0.0010	0.02500	0	103	85	115	2.07	20	
Thallium	0.013	0.00050	0.01250	0	101	85	115	0.854	20	
Uranium	0.013	0.00050	0.01250	0	103	85	115	0.0943	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **MB-44812**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44812**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015293** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000048	0.00020								J

Sample ID: **LCS-44812**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44812**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0043	0.00020	0.005000	0	85.8	80	120			

Sample ID: **1904D77-001FMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **EP-12B**	Batch ID: **44812**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015296** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0042	0.00020	0.005000	0	84.0	75	125			

Sample ID: **1904D77-001FMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **EP-12B**	Batch ID: **44812**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015297** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0043	0.00020	0.005000	0	85.0	75	125	1.16	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R59554**	RunNo: **59554**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2006669** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59554**	RunNo: **59554**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2006670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.8	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.7	90	110			
Bromide	2.4	0.10	2.500	0	97.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.9	90	110			
Sulfate	9.9	0.50	10.00	0	99.1	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R59582**	RunNo: **59582**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59582**	RunNo: **59582**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	90	110			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A59582**	RunNo: **59582**
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007773** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	0.10								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **A59582**	RunNo: **59582**							
Prep Date:	Analysis Date: **5/1/2019**	SeqNo: **2007774**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	95.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB-44636** SampType: **MBLK** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW** Batch ID: **44636** RunNo: **59673**
Prep Date: **5/1/2019** Analysis Date: **5/6/2019** SeqNo: **2012054** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	ND	0.10								
4,4´-DDE	ND	0.10								
4,4´-DDT	ND	0.12								
Aldrin	ND	0.10								
alpha-BHC	ND	0.10								
beta-BHC	ND	0.10								
Chlordane	ND	1.0								
delta-BHC	ND	0.10								
Dieldrin	ND	0.10								
Endosulfan I	ND	0.10								
Endosulfan II	ND	0.10								
Endosulfan sulfate	ND	0.10								
Endrin	ND	0.12								
Endrin aldehyde	ND	0.10								
gamma-BHC	ND	0.10								
Heptachlor	ND	0.10								
Heptachlor epoxide	ND	0.10								
Methoxychlor	ND	0.12								
Toxaphene	ND	1.0								
Surr: Decachlorobiphenyl	2.0		2.500		78.9	29.4	99.8			
Surr: Tetrachloro-m-xylene	2.0		2.500		78.7	20.7	100			

Sample ID: **LCS-44636** SampType: **LCS** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW** Batch ID: **44636** RunNo: **59673**
Prep Date: **5/1/2019** Analysis Date: **5/6/2019** SeqNo: **2012056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	0.42	0.10	0.5000	0	84.7	48.8	145			
4,4´-DDE	0.39	0.10	0.5000	0	78.8	48.5	139			
4,4´-DDT	0.39	0.12	0.5000	0	79.0	44.7	138			
Aldrin	0.40	0.10	0.5000	0	79.3	29.4	145			
alpha-BHC	0.42	0.10	0.5000	0	84.3	45.4	146			
beta-BHC	0.43	0.10	0.5000	0	85.9	54.6	146			
delta-BHC	0.41	0.10	0.5000	0	81.4	51.6	141			
Dieldrin	0.41	0.10	0.5000	0	81.7	42.7	151			
Endosulfan I	0.39	0.10	0.5000	0	77.4	35.8	132			
Endosulfan II	0.40	0.10	0.5000	0	79.6	43.7	129			
Endosulfan sulfate	0.41	0.10	0.5000	0	82.5	46.2	148			
Endrin	0.43	0.12	0.5000	0	85.3	51.8	142			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **LCS-44636** SampType: **LCS** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW** Batch ID: **44636** RunNo: **59673**
Prep Date: **5/1/2019** Analysis Date: **5/6/2019** SeqNo: **2012056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin aldehyde	0.40	0.10	0.5000	0	79.3	32.7	158			
gamma-BHC	0.42	0.10	0.5000	0	83.7	45.9	146			
Heptachlor	0.41	0.10	0.5000	0	82.0	33.1	147			
Heptachlor epoxide	0.42	0.10	0.5000	0	84.9	49.9	144			
Methoxychlor	0.40	0.12	0.5000	0	80.1	15	198			
Surr: Decachlorobiphenyl	2.0		2.500		81.3	29.4	99.8			
Surr: Tetrachloro-m-xylene	1.8		2.500		71.9	20.7	100			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59810**	RunNo: **59810**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017074** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59810**	RunNo: **59810**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017074** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Sample ID: **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B59810**	RunNo: **59810**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.8	70	130			
Toluene	17	1.0	20.00	0	86.6	70	130			
Chlorobenzene	18	1.0	20.00	0	91.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B59810**	RunNo: **59810**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	89.5	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.2	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.1	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	9.2		10.00		92.0	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59844**	RunNo: **59844**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018625** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59844**	RunNo: **59844**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018625** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59844**	RunNo: **59844**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018625** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R59844**	RunNo: **59844**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018626** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	86.0	70	130			
Toluene	17	1.0	20.00	0	84.6	70	130			
Chlorobenzene	17	1.0	20.00	0	87.3	70	130			
1,1-Dichloroethene	15	1.0	20.00	0	74.3	70	130			
Trichloroethene (TCE)	15	1.0	20.00	0	77.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.7	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **mb-44610**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44610**	RunNo: **59639**
Prep Date: **4/30/2019**	Analysis Date: **5/3/2019**	SeqNo: **2010360** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	8.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **mb-44610**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44610**	RunNo: **59639**
Prep Date: **4/30/2019**	Analysis Date: **5/3/2019**	SeqNo: **2010360** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	98		200.0		48.9	15	101			
Surr: Phenol-d5	76		200.0		38.0	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		77.1	27.8	112			
Surr: Nitrobenzene-d5	60		100.0		60.3	33	113			
Surr: 2-Fluorobiphenyl	54		100.0		53.5	26.6	107			
Surr: 4-Terphenyl-d14	87		100.0		86.7	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**

22-May-19

Client: Marathon

Project: Semi Annual Ponds

Sample ID: **lcs-44610**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44610**	RunNo: **59639**
Prep Date: **4/30/2019**	Analysis Date: **5/3/2019**	SeqNo: **2010361** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	64	10	100.0	0	64.0	32.2	94			
4-Chloro-3-methylphenol	160	10	200.0	0	78.2	37.7	101			
2-Chlorophenol	130	10	200.0	0	67.2	32.6	90.1			
1,4-Dichlorobenzene	41	10	100.0	0	40.8	30	87.2			
2,4-Dinitrotoluene	62	10	100.0	0	61.7	35.9	85.8			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.2	37.1	108			
4-Nitrophenol	79	10	200.0	0	39.6	22.4	86.6			
Pentachlorophenol	100	20	200.0	0	50.0	31.6	91			
Phenol	87	10	200.0	0	43.7	21.7	84.9			
Pyrene	69	10	100.0	0	68.8	46.3	103			
1,2,4-Trichlorobenzene	48	10	100.0	0	47.6	30.2	88.3			
Surr: 2-Fluorophenol	96		200.0		48.0	15	101			
Surr: Phenol-d5	78		200.0		38.8	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		79.4	27.8	112			
Surr: Nitrobenzene-d5	65		100.0		65.4	33	113			
Surr: 2-Fluorobiphenyl	55		100.0		55.3	26.6	107			
Surr: 4-Terphenyl-d14	85		100.0		84.7	18.7	148			

Sample ID: **lcsd-44610**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **44610**	RunNo: **59639**
Prep Date: **4/30/2019**	Analysis Date: **5/3/2019**	SeqNo: **2010362** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.3	32.2	102	1.98	32.9	
4-Chloro-3-methylphenol	170	10	200.0	0	84.2	37.7	111	7.35	29.9	
2-Chlorophenol	130	10	200.0	0	65.2	32.6	102	2.87	28.5	
1,4-Dichlorobenzene	42	10	100.0	0	42.4	15	93.4	3.80	44.9	
2,4-Dinitrotoluene	63	10	100.0	0	62.6	35.9	93.4	1.38	28.5	
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.4	37.1	112	6.74	29.9	
4-Nitrophenol	76	10	200.0	0	37.9	15	86.6	4.57	68	
Pentachlorophenol	99	20	200.0	0	49.3	31.6	91	1.39	39.5	
Phenol	82	10	200.0	0	41.1	15	84.9	6.08	44.2	
Pyrene	71	10	100.0	0	71.1	46.3	103	3.17	23.8	
1,2,4-Trichlorobenzene	48	10	100.0	0	48.1	15.7	103	1.04	38	
Surr: 2-Fluorophenol	94		200.0		47.2	15	101	0	0	
Surr: Phenol-d5	70		200.0		35.2	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		75.1	27.8	112	0	0	
Surr: Nitrobenzene-d5	60		100.0		60.4	33	113	0	0	
Surr: 2-Fluorobiphenyl	53		100.0		53.3	26.6	107	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **lcsd-44610**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **44610**	RunNo: **59639**
Prep Date: **4/30/2019**	Analysis Date: **5/3/2019**	SeqNo: **2010362** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	81		100.0		81.2	18.7	148	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB-44652**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **44652**	RunNo: **59671**							
Prep Date: **5/1/2019**	Analysis Date: **5/6/2019**	SeqNo: **2012010**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-44652**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **44652**	RunNo: **59671**							
Prep Date: **5/1/2019**	Analysis Date: **5/6/2019**	SeqNo: **2012011**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	162	2.0	198.0	0	81.8	84.6	115.4			S

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **MB-44607**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **44607**	RunNo: **59546**
Prep Date: **4/29/2019**	Analysis Date: **4/30/2019**	SeqNo: **2006571** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904D77**
22-May-19

Client: Marathon
Project: Semi Annual Ponds

Sample ID: **lcs-1 99.0uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R59563**	RunNo: **59563**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2007012** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	5.0	99.00	0	102	85	115			

Sample ID: **lcs-2 99.0uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R59563**	RunNo: **59563**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2007038** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	5.0	99.00	0	103	85	115			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1904D77 RcptNo: 1

Received By: Victoria Zellar 4/29/2019 3:44:00 PM Victoria Zellar

Completed By: Isaiah Ortiz 4/29/2019 4:05:24 PM I-OX

Reviewed By: LB 4/29/19 @ 1645 / ENM 4/29/19 / ENM 4/30/19

CB: ENM 4/29/19 TO 4/30/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 7+ / 21 (<2 or >12 unless noted)

Adjusted? No / No

Checked by: ENM / YG 4/29/19 4/30/19

Special Handling (if applicable)

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

Person Notified: ____ Date: ____

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

Regarding: ____

Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			
2	9.5	Good	Yes			
3	4.4	Good	Yes			

Chain-of-Custody Record

Client: MARATHON

Gallup Refinery

Mailing Address:

92 GIANT CROSSING RD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

SEMI-ANNUAL PONDS

Project #:

PONDS 6,7,8.9, 11, 12B

Project Manager:

CAJOHNSON1@MARATHONPETROLEUM.COM

BMOORE1@MARATHONPETROLEUM.COM

Sampler: C JOHNSON

On Ice: X Yes ☐ No

Sample Temperature: 3 Coolers CF=-0.1 4.1, 9.5, 4.4°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1904D77	8260+MTBE	8270	WQCC METALS - TOTAL	WQCC METALS - DISS (FILTERE	GEN CHEM (pH, Spec Cond, Major Cations/Anions, NITRATE/NITRITE)		BOD	COD	E-COLI	Pesticides 8081 (Rev C) 4-24-19					Air Bubbles (Y or N)
4/29/2019	900	Aqueous	EP-12B	MISC	MISC	-001	X	X	X	X	X		X	X	X	X					
4/29/2019	930	Aqueous	EP-11	MISC	MISC	-002	X	X	X	X	X		X	X	X						
4/29/2019	950	Aqueous	EP-7	MISC	MISC	-003	X	X	X	X	X		X	X	X						
4/29/2019	1030	Aqueous	EP-8	MISC	MISC	-004	X	X	X	X	X		X	X	X						
4/29/2019	1036	Aqueous	DUPLICATE	MISC	MISC	-005	X	X	X	X	X		X	X	X						
4/29/2019	1130	Aqueous	EP-9	MISC	MISC	-006	X	X	X	X	X		X	X	X						
4/29/2019	1200	Aqueous	EP-6	MISC	MISC	-007	X	X	X	X	X		X	X	X						
4/29/2019	700	Aqueous	TRIP BLANK	40ML VOAS	HCL	-008	X														
4/29/2019	700	Aqueous	FIELD BLANK	40ML VOAS	HCL	-009	X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/29/19	1330			4-29-19	1400
Date:	Time:	Relinquished by:	Received by:	Date	Time
4/29/19	1544		CDO via 4/29/19	4/29/19	1544

Remarks:

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

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	839		10.0	1	05/04/2019 12:50	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2160		100	10	05/04/2019 12:50	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2370		100	10	05/04/2019 12:50	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1850		100	10	05/04/2019 12:51	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2410		100	10	05/04/2019 12:51	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1630		100	10	05/04/2019 12:51	WG1276037

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	393		10.0	1	05/04/2019 12:51	WG1276037

QUALITY CONTROL SUMMARY

L1094088-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3408194-1 05/04/19 12:50

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1094277-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1094277-01 05/04/19 12:52 • (DUP) R3408194-3 05/04/19 12:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	12.0	10.2	1	15.8		20

L1094329-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1094329-03 05/04/19 12:53 • (DUP) R3408194-4 05/04/19 12:53

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	15.5	15.6	1	0.861		20

Laboratory Control Sample (LCS)

(LCS) R3408194-2 05/04/19 12:50

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
COD	222	205	92.5	90.0-110	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 22, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX:

RE: SEMI ANNUAL PONDS OrderNo.: 1904E06

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/30/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: TRIP BLANK
Project: SEMI ANNUAL PONDS
Collection Date:
Lab ID: 1904E06-001 **Matrix:** AQUEOUS **Received Date:** 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Acetone	2.0	1.2	10	J	µg/L	1	5/10/2019 1:09:22 PM	B59810
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 1:09:22 PM	B59810
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 1:09:22 PM	B59810
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 1:09:22 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: TRIP BLANK
Project: SEMI ANNUAL PONDS
Collection Date:
Lab ID: 1904E06-001 **Matrix:** AQUEOUS **Received Date:** 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 1:09:22 PM	B59810
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 1:09:22 PM	B59810
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 1:09:22 PM	B59810
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 1:09:22 PM	B59810
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	5/10/2019 1:09:22 PM	B59810
Surr: 4-Bromofluorobenzene	91.6	0	70-130		%Rec	1	5/10/2019 1:09:22 PM	B59810
Surr: Dibromofluoromethane	97.0	0	70-130		%Rec	1	5/10/2019 1:09:22 PM	B59810
Surr: Toluene-d8	94.4	0	70-130		%Rec	1	5/10/2019 1:09:22 PM	B59810

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: FIELD BLANK
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 7:00:00 AM
Lab ID: 1904E06-002
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Acetone	2.2	1.2	10	J	µg/L	1	5/10/2019 1:38:24 PM	B59810
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 1:38:24 PM	B59810
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 1:38:24 PM	B59810
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 1:38:24 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: FIELD BLANK
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 7:00:00 AM
Lab ID: 1904E06-002
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 1:38:24 PM	B59810
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 1:38:24 PM	B59810
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 1:38:24 PM	B59810
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 1:38:24 PM	B59810
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	5/10/2019 1:38:24 PM	B59810
Surr: 4-Bromofluorobenzene	95.9	0	70-130		%Rec	1	5/10/2019 1:38:24 PM	B59810
Surr: Dibromofluoromethane	99.2	0	70-130		%Rec	1	5/10/2019 1:38:24 PM	B59810
Surr: Toluene-d8	96.6	0	70-130		%Rec	1	5/10/2019 1:38:24 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-5
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 7:30:00 AM
Lab ID: 1904E06-003
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	31	1.0	2.0	*	mg/L	20	5/1/2019 2:27:07 AM	A59542
Chloride	3900	31	250		mg/L	500	5/10/2019 9:20:33 PM	R59816
Nitrogen, Nitrite (As N)	ND	0.076	2.0		mg/L	20	5/1/2019 2:27:07 AM	A59542
Bromide	1.0	0.073	0.50		mg/L	5	5/1/2019 2:14:43 AM	A59542
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/1/2019 2:14:43 AM	A59542
Phosphorus, Orthophosphate (As P)	ND	0.12	2.5		mg/L	5	5/1/2019 2:14:43 AM	A59542
Sulfate	1500	27	250		mg/L	500	5/10/2019 9:20:33 PM	R59816
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.051	0.0025	0.020		mg/L	1	5/2/2019 8:11:25 PM	B59599
Barium	0.19	0.00065	0.0020		mg/L	1	5/2/2019 8:11:25 PM	B59599
Beryllium	0.00032	0.00028	0.0020	J	mg/L	1	5/2/2019 8:11:25 PM	B59599
Boron	0.47	0.0045	0.040		mg/L	1	5/2/2019 8:11:25 PM	B59599
Cadmium	ND	0.00055	0.0020		mg/L	1	5/2/2019 8:11:25 PM	B59599
Calcium	330	0.31	5.0		mg/L	5	5/2/2019 8:20:10 PM	B59599
Chromium	ND	0.0015	0.0060		mg/L	1	5/2/2019 8:11:25 PM	B59599
Cobalt	ND	0.0031	0.0060		mg/L	1	5/2/2019 8:11:25 PM	B59599
Copper	ND	0.0013	0.0060		mg/L	1	5/2/2019 8:11:25 PM	B59599
Iron	0.093	0.0087	0.020		mg/L	1	5/2/2019 8:11:25 PM	B59599
Magnesium	110	0.25	5.0		mg/L	5	5/2/2019 8:20:10 PM	B59599
Manganese	0.45	0.00029	0.0020	*	mg/L	1	5/2/2019 8:11:25 PM	B59599
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/2/2019 8:11:25 PM	B59599
Nickel	0.012	0.0040	0.010		mg/L	1	5/2/2019 8:11:25 PM	B59599
Potassium	300	0.81	5.0		mg/L	5	5/2/2019 8:20:10 PM	B59599
Silver	0.0055	0.00094	0.0050		mg/L	1	5/2/2019 8:11:25 PM	B59599
Sodium	2300	21	50		mg/L	50	5/6/2019 6:08:33 PM	C59669
Zinc	0.016	0.0023	0.010		mg/L	1	5/2/2019 8:11:25 PM	B59599
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.71	0.0025	0.020	*	mg/L	1	5/7/2019 6:23:00 PM	44753
Barium	0.20	0.00065	0.0020		mg/L	1	5/7/2019 6:23:00 PM	44753
Beryllium	0.00066	0.00028	0.0020	J	mg/L	1	5/7/2019 6:23:00 PM	44753
Boron	0.48	0.0045	0.040		mg/L	1	5/7/2019 6:23:00 PM	44753
Cadmium	ND	0.00074	0.0020		mg/L	1	5/7/2019 6:23:00 PM	44753
Chromium	0.0018	0.0015	0.0060	J	mg/L	1	5/8/2019 6:43:30 PM	44753
Cobalt	ND	0.0031	0.0060		mg/L	1	5/7/2019 6:23:00 PM	44753
Copper	0.0044	0.0041	0.0060	J	mg/L	1	5/7/2019 6:23:00 PM	44753
Iron	0.38	0.0087	0.020	*	mg/L	1	5/7/2019 6:23:00 PM	44753
Manganese	0.48	0.00029	0.0020	*	mg/L	1	5/7/2019 6:23:00 PM	44753
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/8/2019 6:43:30 PM	44753

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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-5
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 7:30:00 AM
Lab ID: 1904E06-003
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.014	0.0040	0.010		mg/L	1	5/7/2019 6:23:00 PM	44753
Silver	0.0069	0.0014	0.0050		mg/L	1	5/7/2019 6:23:00 PM	44753
Zinc	ND	0.0058	0.010		mg/L	1	5/8/2019 6:43:30 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/10/2019 4:49:03 PM	A59775
Arsenic	0.011	0.00050	0.0050	*	mg/L	5	5/10/2019 4:49:03 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 4:49:03 PM	A59775
Selenium	0.0057	0.00086	0.0050		mg/L	5	5/10/2019 4:49:03 PM	A59775
Thallium	0.00041	0.00024	0.0025	J	mg/L	5	5/10/2019 4:49:03 PM	A59775
Uranium	0.0019	0.00037	0.0025	J	mg/L	5	5/10/2019 4:49:03 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/9/2019 5:16:17 PM	44753
Arsenic	0.014	0.0016	0.0050	*	mg/L	5	5/9/2019 5:16:17 PM	44753
Lead	0.00049	0.00027	0.0025	J	mg/L	5	5/9/2019 5:16:17 PM	44753
Selenium	0.0053	0.0024	0.0050		mg/L	5	5/9/2019 5:16:17 PM	44753
Thallium	ND	0.00026	0.0025		mg/L	5	5/9/2019 5:16:17 PM	44753
Uranium	0.0023	0.00042	0.0025	J	mg/L	5	5/14/2019 3:17:04 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000068	0.000038	0.00020	J	mg/L	1	5/9/2019 1:38:34 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	97	2.0	2.0	R	mg/L	1	5/6/2019 4:04:00 PM	44657
NOTES:								
R - RPD between dilutions >30%.								
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	109	10.00	10.00	H	MPN/100	10	5/1/2019 4:00:00 PM	44628
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Acenaphthylene	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Aniline	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Anthracene	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Azobenzene	ND	34	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Benz(a)anthracene	ND	26	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Benzo(a)pyrene	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-5
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 7:30:00 AM
Lab ID: 1904E06-003
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	36	32	100	J	µg/L	1	5/9/2019 5:10:52 PM	44729
Benzyl alcohol	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/9/2019 5:10:52 PM	44729
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Carbazole	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/9/2019 5:10:52 PM	44729
4-Chloroaniline	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2-Chloronaphthalene	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2-Chlorophenol	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Chrysene	ND	34	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Dibenzofuran	ND	34	50		µg/L	1	5/9/2019 5:10:52 PM	44729
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Diethyl phthalate	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Dimethyl phthalate	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/9/2019 5:10:52 PM	44729
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/9/2019 5:10:52 PM	44729
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/9/2019 5:10:52 PM	44729
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Fluoranthene	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Fluorene	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Hexachlorobenzene	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Hexachlorobutadiene	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Hexachloroethane	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Isophorone	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729

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CLIENT: MARATHON GALLUP
Client Sample ID: EP-5
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 7:30:00 AM
Lab ID: 1904E06-003 **Matrix:** AQUEOUS **Received Date:** 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	35	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2-Methylnaphthalene	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2-Methylphenol	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
3+4-Methylphenol	ND	27	50		µg/L	1	5/9/2019 5:10:52 PM	44729
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/9/2019 5:10:52 PM	44729
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/9/2019 5:10:52 PM	44729
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Naphthalene	ND	25	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2-Nitroaniline	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
3-Nitroaniline	ND	34	50		µg/L	1	5/9/2019 5:10:52 PM	44729
4-Nitroaniline	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Nitrobenzene	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2-Nitrophenol	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
4-Nitrophenol	ND	28	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Pentachlorophenol	ND	26	100		µg/L	1	5/9/2019 5:10:52 PM	44729
Phenanthrene	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Phenol	ND	30	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Pyrene	ND	33	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Pyridine	ND	27	50		µg/L	1	5/9/2019 5:10:52 PM	44729
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/9/2019 5:10:52 PM	44729
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/9/2019 5:10:52 PM	44729
Surr: 2-Fluorophenol	45.4	0	15-101		%Rec	1	5/9/2019 5:10:52 PM	44729
Surr: Phenol-d5	33.5	0	15-84.6		%Rec	1	5/9/2019 5:10:52 PM	44729
Surr: 2,4,6-Tribromophenol	56.4	0	27.8-112		%Rec	1	5/9/2019 5:10:52 PM	44729
Surr: Nitrobenzene-d5	56.0	0	33-113		%Rec	1	5/9/2019 5:10:52 PM	44729
Surr: 2-Fluorobiphenyl	41.5	0	26.6-107		%Rec	1	5/9/2019 5:10:52 PM	44729
Surr: 4-Terphenyl-d14	59.1	0	18.7-148		%Rec	1	5/9/2019 5:10:52 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 5:32:27 PM	B59810

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-5
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 7:30:00 AM
Lab ID: 1904E06-003 **Matrix:** AQUEOUS **Received Date:** 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Carbon disulfide	ND	4.5	100	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Chloromethane	ND	3.2	30	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810

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Lab ID: 1904E06-003
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Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 5:32:27 PM	B59810
Surr: 1,2-Dichloroethane-d4	105	0	70-130	D	%Rec	10	5/10/2019 5:32:27 PM	B59810
Surr: 4-Bromofluorobenzene	96.9	0	70-130	D	%Rec	10	5/10/2019 5:32:27 PM	B59810
Surr: Dibromofluoromethane	96.3	0	70-130	D	%Rec	10	5/10/2019 5:32:27 PM	B59810
Surr: Toluene-d8	94.9	0	70-130	D	%Rec	10	5/10/2019 5:32:27 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	18000	250	250		µmhos/c	50	4/30/2019 6:19:42 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.81			H	pH units	1	5/2/2019 11:29:45 AM	R59602

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-4
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:00:00 AM
Lab ID: 1904E06-004
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	32	1.0	2.0	*	mg/L	20	5/1/2019 3:16:44 AM	A59542
Chloride	3100	12	100		mg/L	200	5/10/2019 9:33:25 PM	R59816
Nitrogen, Nitrite (As N)	ND	0.076	2.0		mg/L	20	5/1/2019 3:16:44 AM	A59542
Bromide	0.77	0.073	0.50		mg/L	5	5/1/2019 3:04:20 AM	A59542
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/1/2019 3:04:20 AM	A59542
Phosphorus, Orthophosphate (As P)	ND	0.12	2.5		mg/L	5	5/1/2019 3:04:20 AM	A59542
Sulfate	1500	11	100		mg/L	200	5/10/2019 9:33:25 PM	R59816
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.074	0.0025	0.020		mg/L	1	5/2/2019 8:24:42 PM	B59599
Barium	0.24	0.00065	0.0020		mg/L	1	5/2/2019 8:24:42 PM	B59599
Beryllium	0.00037	0.00028	0.0020	J	mg/L	1	5/2/2019 8:24:42 PM	B59599
Boron	0.45	0.0045	0.040		mg/L	1	5/2/2019 8:24:42 PM	B59599
Cadmium	ND	0.00055	0.0020		mg/L	1	5/2/2019 8:24:42 PM	B59599
Calcium	260	0.31	5.0		mg/L	5	5/2/2019 8:26:50 PM	B59599
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	5/6/2019 6:10:39 PM	C59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/2/2019 8:24:42 PM	B59599
Copper	0.0015	0.0013	0.0060	J	mg/L	1	5/2/2019 8:24:42 PM	B59599
Iron	0.31	0.0087	0.020	*	mg/L	1	5/2/2019 8:24:42 PM	B59599
Magnesium	69	0.050	1.0		mg/L	1	5/2/2019 8:24:42 PM	B59599
Manganese	0.34	0.00029	0.0020	*	mg/L	1	5/2/2019 8:24:42 PM	B59599
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/2/2019 8:24:42 PM	B59599
Nickel	0.011	0.0040	0.010		mg/L	1	5/2/2019 8:24:42 PM	B59599
Potassium	230	0.81	5.0		mg/L	5	5/2/2019 8:26:50 PM	B59599
Silver	0.0046	0.00094	0.0050	J	mg/L	1	5/2/2019 8:24:42 PM	B59599
Sodium	1300	8.3	20		mg/L	20	5/6/2019 6:16:45 PM	C59669
Zinc	0.019	0.0023	0.010		mg/L	1	5/6/2019 6:10:39 PM	C59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.16	0.0025	0.020		mg/L	1	5/7/2019 6:27:38 PM	44753
Barium	0.24	0.00065	0.0020		mg/L	1	5/7/2019 6:27:38 PM	44753
Beryllium	0.00051	0.00028	0.0020	J	mg/L	1	5/7/2019 6:27:38 PM	44753
Boron	0.45	0.0045	0.040		mg/L	1	5/7/2019 6:27:38 PM	44753
Cadmium	ND	0.00074	0.0020		mg/L	1	5/7/2019 6:27:38 PM	44753
Chromium	0.0019	0.0015	0.0060	J	mg/L	1	5/8/2019 6:45:46 PM	44753
Cobalt	ND	0.0031	0.0060		mg/L	1	5/7/2019 6:27:38 PM	44753
Copper	0.0056	0.0041	0.0060	J	mg/L	1	5/7/2019 6:27:38 PM	44753
Iron	0.53	0.0087	0.020	*	mg/L	1	5/7/2019 6:27:38 PM	44753
Manganese	0.36	0.00029	0.0020	*	mg/L	1	5/7/2019 6:27:38 PM	44753
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/8/2019 6:45:46 PM	44753

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PQL	Practical Quanitative Limit
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-4
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:00:00 AM
Lab ID: 1904E06-004
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.011	0.0040	0.010		mg/L	1	5/7/2019 6:27:38 PM	44753
Silver	0.0056	0.0014	0.0050		mg/L	1	5/7/2019 6:27:38 PM	44753
Zinc	0.0082	0.0058	0.010	J	mg/L	1	5/9/2019 8:05:54 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/10/2019 4:51:45 PM	A59775
Arsenic	0.0064	0.00050	0.0050		mg/L	5	5/10/2019 4:51:45 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 4:51:45 PM	A59775
Selenium	0.012	0.00086	0.0050		mg/L	5	5/10/2019 4:51:45 PM	A59775
Thallium	ND	0.00024	0.0025		mg/L	5	5/10/2019 4:51:45 PM	A59775
Uranium	0.0018	0.00037	0.0025	J	mg/L	5	5/10/2019 4:51:45 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/9/2019 5:27:55 PM	44753
Arsenic	0.0084	0.0016	0.0050		mg/L	5	5/9/2019 5:27:55 PM	44753
Lead	ND	0.00027	0.0025		mg/L	5	5/9/2019 5:27:55 PM	44753
Selenium	0.0068	0.0024	0.0050		mg/L	5	5/14/2019 3:19:16 PM	44753
Thallium	ND	0.00026	0.0025		mg/L	5	5/9/2019 5:27:55 PM	44753
Uranium	0.0021	0.00042	0.0025	J	mg/L	5	5/9/2019 5:27:55 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000098	0.000038	0.00020	J	mg/L	1	5/9/2019 1:40:52 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	264	2.0	2.0	R	mg/L	1	5/6/2019 4:04:00 PM	44657
NOTES: R - RPD between dilutions >30%.								
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	>24196	10.00	10.00		MPN/100	10	5/1/2019 4:00:00 PM	44628
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Acenaphthylene	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Aniline	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Anthracene	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Azobenzene	ND	34	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Benz(a)anthracene	ND	26	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Benzo(a)pyrene	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-4
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:00:00 AM
Lab ID: 1904E06-004
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	37	32	100	J	µg/L	1	5/9/2019 5:40:32 PM	44729
Benzyl alcohol	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/9/2019 5:40:32 PM	44729
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Carbazole	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/9/2019 5:40:32 PM	44729
4-Chloroaniline	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2-Chloronaphthalene	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2-Chlorophenol	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Chrysene	ND	34	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Dibenzofuran	ND	34	50		µg/L	1	5/9/2019 5:40:32 PM	44729
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Diethyl phthalate	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Dimethyl phthalate	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/9/2019 5:40:32 PM	44729
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/9/2019 5:40:32 PM	44729
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/9/2019 5:40:32 PM	44729
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Fluoranthene	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Fluorene	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Hexachlorobenzene	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Hexachlorobutadiene	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Hexachloroethane	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Isophorone	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729

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CLIENT: MARATHON GALLUP
Client Sample ID: EP-4
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:00:00 AM
Lab ID: 1904E06-004
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	35	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2-Methylnaphthalene	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2-Methylphenol	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
3+4-Methylphenol	ND	27	50		µg/L	1	5/9/2019 5:40:32 PM	44729
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/9/2019 5:40:32 PM	44729
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/9/2019 5:40:32 PM	44729
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Naphthalene	ND	25	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2-Nitroaniline	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
3-Nitroaniline	ND	34	50		µg/L	1	5/9/2019 5:40:32 PM	44729
4-Nitroaniline	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Nitrobenzene	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2-Nitrophenol	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
4-Nitrophenol	ND	28	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Pentachlorophenol	ND	26	100		µg/L	1	5/9/2019 5:40:32 PM	44729
Phenanthrene	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Phenol	ND	30	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Pyrene	ND	33	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Pyridine	ND	27	50		µg/L	1	5/9/2019 5:40:32 PM	44729
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/9/2019 5:40:32 PM	44729
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/9/2019 5:40:32 PM	44729
Surr: 2-Fluorophenol	46.7	0	15-101		%Rec	1	5/9/2019 5:40:32 PM	44729
Surr: Phenol-d5	34.4	0	15-84.6		%Rec	1	5/9/2019 5:40:32 PM	44729
Surr: 2,4,6-Tribromophenol	53.0	0	27.8-112		%Rec	1	5/9/2019 5:40:32 PM	44729
Surr: Nitrobenzene-d5	61.9	0	33-113		%Rec	1	5/9/2019 5:40:32 PM	44729
Surr: 2-Fluorobiphenyl	44.9	0	26.6-107		%Rec	1	5/9/2019 5:40:32 PM	44729
Surr: 4-Terphenyl-d14	53.9	0	18.7-148		%Rec	1	5/9/2019 5:40:32 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 6:01:43 PM	B59810

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CLIENT: MARATHON GALLUP
Client Sample ID: EP-4
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:00:00 AM
Lab ID: 1904E06-004
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Carbon disulfide	5.8	4.5	100	JD	µg/L	10	5/10/2019 6:01:43 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Chloromethane	ND	3.2	30	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-4
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:00:00 AM
Lab ID: 1904E06-004
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 6:01:43 PM	B59810
Surr: 1,2-Dichloroethane-d4	107	0	70-130	D	%Rec	10	5/10/2019 6:01:43 PM	B59810
Surr: 4-Bromofluorobenzene	96.5	0	70-130	D	%Rec	10	5/10/2019 6:01:43 PM	B59810
Surr: Dibromofluoromethane	97.2	0	70-130	D	%Rec	10	5/10/2019 6:01:43 PM	B59810
Surr: Toluene-d8	96.8	0	70-130	D	%Rec	10	5/10/2019 6:01:43 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	10000	5.0	5.0		µmhos/c	1	4/30/2019 6:02:59 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.75			H	pH units	1	5/2/2019 11:33:46 AM	R59602

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-3
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:50:00 AM
Lab ID: 1904E06-005 **Matrix:** AQUEOUS **Received Date:** 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **JME**	
4,4´-DDD	ND	4.0	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
4,4´-DDE	ND	4.3	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
4,4´-DDT	ND	5.1	6.2		µg/L	10	5/6/2019 3:02:39 PM	44636
Aldrin	ND	4.2	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
alpha-BHC	ND	4.1	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
beta-BHC	ND	4.7	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Chlordane	ND	25	50		µg/L	10	5/6/2019 3:02:39 PM	44636
delta-BHC	ND	4.3	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Dieldrin	ND	4.2	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Endosulfan I	ND	4.2	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Endosulfan II	ND	4.4	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Endosulfan sulfate	ND	4.5	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Endrin	ND	5.7	6.2		µg/L	10	5/6/2019 3:02:39 PM	44636
Endrin aldehyde	ND	4.1	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
gamma-BHC	ND	4.2	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Heptachlor	ND	4.3	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Heptachlor epoxide	ND	4.4	5.0		µg/L	10	5/6/2019 3:02:39 PM	44636
Methoxychlor	ND	5.6	6.2		µg/L	10	5/6/2019 3:02:39 PM	44636
Toxaphene	ND	25	50		µg/L	10	5/6/2019 3:02:39 PM	44636
Surr: Decachlorobiphenyl	57.6	0	29.4-99.8		%Rec	10	5/6/2019 3:02:39 PM	44636
Surr: Tetrachloro-m-xylene	63.3	0	20.7-100		%Rec	10	5/6/2019 3:02:39 PM	44636
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	34	1.0	2.0	*	mg/L	20	5/1/2019 3:41:34 AM	A59542
Chloride	2200	12	100		mg/L	200	5/10/2019 9:46:16 PM	R59816
Nitrogen, Nitrite (As N)	ND	0.076	2.0		mg/L	20	5/1/2019 3:41:34 AM	A59542
Bromide	0.54	0.073	0.50		mg/L	5	5/1/2019 3:29:09 AM	A59542
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/1/2019 3:29:09 AM	A59542
Phosphorus, Orthophosphate (As P)	ND	0.12	2.5		mg/L	5	5/1/2019 3:29:09 AM	A59542
Sulfate	1500	11	100		mg/L	200	5/10/2019 9:46:16 PM	R59816
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.086	0.0025	0.020		mg/L	1	5/2/2019 8:31:14 PM	B59599
Barium	0.24	0.00065	0.0020		mg/L	1	5/2/2019 8:31:14 PM	B59599
Beryllium	ND	0.00028	0.0020		mg/L	1	5/2/2019 8:31:14 PM	B59599
Boron	0.44	0.0045	0.040		mg/L	1	5/2/2019 8:31:14 PM	B59599
Cadmium	ND	0.00055	0.0020		mg/L	1	5/2/2019 8:31:14 PM	B59599
Calcium	260	0.62	10		mg/L	10	5/2/2019 8:33:22 PM	B59599
Chromium	0.0016	0.0015	0.0060	J	mg/L	1	5/6/2019 6:25:19 PM	C59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/2/2019 8:31:14 PM	B59599

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-3
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:50:00 AM
Lab ID: 1904E06-005
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Copper	0.0039	0.0013	0.0060	J	mg/L	1	5/2/2019 8:31:14 PM	B59599
Iron	0.33	0.0087	0.020	*	mg/L	1	5/2/2019 8:31:14 PM	B59599
Magnesium	68	0.050	1.0		mg/L	1	5/2/2019 8:31:14 PM	B59599
Manganese	0.34	0.00029	0.0020	*	mg/L	1	5/2/2019 8:31:14 PM	B59599
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/2/2019 8:31:14 PM	B59599
Nickel	0.013	0.0040	0.010		mg/L	1	5/2/2019 8:31:14 PM	B59599
Potassium	230	1.6	10		mg/L	10	5/2/2019 8:33:22 PM	B59599
Silver	0.0044	0.00094	0.0050	J	mg/L	1	5/2/2019 8:31:14 PM	B59599
Sodium	1400	8.3	20		mg/L	20	5/6/2019 6:31:27 PM	C59669
Zinc	0.045	0.0023	0.010		mg/L	1	5/6/2019 6:25:19 PM	C59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.16	0.0025	0.020		mg/L	1	5/7/2019 6:32:15 PM	44753
Barium	0.24	0.00065	0.0020		mg/L	1	5/7/2019 6:32:15 PM	44753
Beryllium	0.00046	0.00028	0.0020	J	mg/L	1	5/7/2019 6:32:15 PM	44753
Boron	0.45	0.0045	0.040		mg/L	1	5/7/2019 6:32:15 PM	44753
Cadmium	ND	0.00074	0.0020		mg/L	1	5/7/2019 6:32:15 PM	44753
Chromium	0.0019	0.0015	0.0060	J	mg/L	1	5/8/2019 6:48:02 PM	44753
Cobalt	ND	0.0031	0.0060		mg/L	1	5/7/2019 6:32:15 PM	44753
Copper	0.0056	0.0041	0.0060	J	mg/L	1	5/7/2019 6:32:15 PM	44753
Iron	0.53	0.0087	0.020	*	mg/L	1	5/7/2019 6:32:15 PM	44753
Manganese	0.36	0.00029	0.0020	*	mg/L	1	5/7/2019 6:32:15 PM	44753
Molybdenum	0.0075	0.0067	0.0080	J	mg/L	1	5/8/2019 6:48:02 PM	44753
Nickel	0.014	0.0040	0.010		mg/L	1	5/7/2019 6:32:15 PM	44753
Silver	0.0058	0.0014	0.0050		mg/L	1	5/7/2019 6:32:15 PM	44753
Zinc	0.0084	0.0058	0.010	J	mg/L	1	5/8/2019 6:48:02 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/10/2019 4:54:28 PM	A59775
Arsenic	0.0066	0.00050	0.0050		mg/L	5	5/10/2019 4:54:28 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 4:54:28 PM	A59775
Selenium	0.0085	0.00086	0.0050		mg/L	5	5/10/2019 4:54:28 PM	A59775
Thallium	ND	0.00024	0.0025		mg/L	5	5/10/2019 4:54:28 PM	A59775
Uranium	0.0018	0.00037	0.0025	J	mg/L	5	5/10/2019 4:54:28 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/9/2019 5:30:07 PM	44753
Arsenic	0.0087	0.0016	0.0050		mg/L	5	5/9/2019 5:30:07 PM	44753
Lead	0.00075	0.00027	0.0025	J	mg/L	5	5/9/2019 5:30:07 PM	44753
Selenium	0.0087	0.0024	0.0050		mg/L	5	5/14/2019 3:21:27 PM	44753
Thallium	ND	0.00026	0.0025		mg/L	5	5/9/2019 5:30:07 PM	44753

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-3
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:50:00 AM
Lab ID: 1904E06-005
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: METALS							Analyst: **DBK**	
Uranium	0.0020	0.00042	0.0025	J	mg/L	5	5/9/2019 5:30:07 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	5/9/2019 1:43:09 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	158	2.0	2.0		mg/L	1	5/6/2019 4:04:00 PM	44657
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	19863	10.00	10.00		MPN/100	10	5/1/2019 4:00:00 PM	44628
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Acenaphthylene	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Aniline	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Anthracene	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Azobenzene	ND	34	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Benz(a)anthracene	ND	26	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Benzo(a)pyrene	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Benzoic acid	ND	32	100		µg/L	1	5/9/2019 6:10:14 PM	44729
Benzyl alcohol	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/9/2019 6:10:14 PM	44729
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Carbazole	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/9/2019 6:10:14 PM	44729
4-Chloroaniline	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2-Chloronaphthalene	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2-Chlorophenol	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Chrysene	ND	34	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Dibenzofuran	ND	34	50		µg/L	1	5/9/2019 6:10:14 PM	44729

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-3
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:50:00 AM
Lab ID: 1904E06-005
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Diethyl phthalate	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Dimethyl phthalate	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/9/2019 6:10:14 PM	44729
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/9/2019 6:10:14 PM	44729
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/9/2019 6:10:14 PM	44729
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Fluoranthene	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Fluorene	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Hexachlorobenzene	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Hexachlorobutadiene	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Hexachloroethane	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Isophorone	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
1-Methylnaphthalene	ND	35	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2-Methylnaphthalene	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2-Methylphenol	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
3+4-Methylphenol	ND	27	50		µg/L	1	5/9/2019 6:10:14 PM	44729
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/9/2019 6:10:14 PM	44729
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/9/2019 6:10:14 PM	44729
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Naphthalene	ND	25	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2-Nitroaniline	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
3-Nitroaniline	ND	34	50		µg/L	1	5/9/2019 6:10:14 PM	44729
4-Nitroaniline	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Nitrobenzene	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2-Nitrophenol	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
4-Nitrophenol	ND	28	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Pentachlorophenol	ND	26	100		µg/L	1	5/9/2019 6:10:14 PM	44729
Phenanthrene	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Phenol	ND	30	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Pyrene	ND	33	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Pyridine	ND	27	50		µg/L	1	5/9/2019 6:10:14 PM	44729

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-3
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:50:00 AM
Lab ID: 1904E06-005 **Matrix:** AQUEOUS **Received Date:** 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/9/2019 6:10:14 PM	44729
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/9/2019 6:10:14 PM	44729
Surr: 2-Fluorophenol	42.4	0	15-101		%Rec	1	5/9/2019 6:10:14 PM	44729
Surr: Phenol-d5	30.4	0	15-84.6		%Rec	1	5/9/2019 6:10:14 PM	44729
Surr: 2,4,6-Tribromophenol	46.3	0	27.8-112		%Rec	1	5/9/2019 6:10:14 PM	44729
Surr: Nitrobenzene-d5	56.0	0	33-113		%Rec	1	5/9/2019 6:10:14 PM	44729
Surr: 2-Fluorobiphenyl	42.5	0	26.6-107		%Rec	1	5/9/2019 6:10:14 PM	44729
Surr: 4-Terphenyl-d14	51.2	0	18.7-148		%Rec	1	5/9/2019 6:10:14 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Carbon disulfide	6.4	4.5	100	JD	µg/L	10	5/10/2019 6:30:53 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Chloromethane	ND	3.2	30	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-3
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:50:00 AM
Lab ID: 1904E06-005 **Matrix:** AQUEOUS **Received Date:** 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 6:30:53 PM	B59810
Surr: 1,2-Dichloroethane-d4	109	0	70-130	D	%Rec	10	5/10/2019 6:30:53 PM	B59810
Surr: 4-Bromofluorobenzene	94.7	0	70-130	D	%Rec	10	5/10/2019 6:30:53 PM	B59810
Surr: Dibromofluoromethane	98.6	0	70-130	D	%Rec	10	5/10/2019 6:30:53 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-3
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:50:00 AM
Lab ID: 1904E06-005
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.3	0	70-130	D	%Rec	10	5/10/2019 6:30:53 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	8200	5.0	5.0		µmhos/c	1	4/30/2019 6:07:01 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.58			H	pH units	1	5/2/2019 11:37:38 AM	R59602

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

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:58:00 AM
Lab ID: 1904E06-006
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **JME**	
4,4´-DDD	ND	4.0	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
4,4´-DDE	ND	4.3	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
4,4´-DDT	ND	5.1	6.2		µg/L	10	5/6/2019 3:29:11 PM	44636
Aldrin	ND	4.2	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
alpha-BHC	ND	4.1	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
beta-BHC	ND	4.7	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Chlordane	ND	25	50		µg/L	10	5/6/2019 3:29:11 PM	44636
delta-BHC	ND	4.3	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Dieldrin	ND	4.2	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Endosulfan I	ND	4.2	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Endosulfan II	ND	4.4	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Endosulfan sulfate	ND	4.5	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Endrin	ND	5.7	6.2		µg/L	10	5/6/2019 3:29:11 PM	44636
Endrin aldehyde	ND	4.1	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
gamma-BHC	ND	4.2	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Heptachlor	ND	4.3	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Heptachlor epoxide	ND	4.4	5.0		µg/L	10	5/6/2019 3:29:11 PM	44636
Methoxychlor	ND	5.6	6.2		µg/L	10	5/6/2019 3:29:11 PM	44636
Toxaphene	ND	25	50		µg/L	10	5/6/2019 3:29:11 PM	44636
Surr: Decachlorobiphenyl	44.9	0	29.4-99.8		%Rec	10	5/6/2019 3:29:11 PM	44636
Surr: Tetrachloro-m-xylene	46.5	0	20.7-100		%Rec	10	5/6/2019 3:29:11 PM	44636
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	33	1.0	2.0	*	mg/L	20	5/1/2019 4:06:24 AM	A59542
Chloride	2000	12	100		mg/L	200	5/10/2019 9:59:08 PM	R59816
Nitrogen, Nitrite (As N)	ND	0.076	2.0		mg/L	20	5/1/2019 4:06:24 AM	A59542
Bromide	0.58	0.073	0.50		mg/L	5	5/1/2019 3:53:59 AM	A59542
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/1/2019 3:53:59 AM	A59542
Phosphorus, Orthophosphate (As P)	ND	0.12	2.5		mg/L	5	5/1/2019 3:53:59 AM	A59542
Sulfate	1400	11	100		mg/L	200	5/10/2019 9:59:08 PM	R59816
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.090	0.0025	0.020		mg/L	1	5/2/2019 8:37:41 PM	B59599
Barium	0.24	0.00065	0.0020		mg/L	1	5/2/2019 8:37:41 PM	B59599
Beryllium	0.00034	0.00028	0.0020	J	mg/L	1	5/2/2019 8:37:41 PM	B59599
Boron	0.44	0.0045	0.040		mg/L	1	5/2/2019 8:37:41 PM	B59599
Cadmium	ND	0.00055	0.0020		mg/L	1	5/2/2019 8:37:41 PM	B59599
Calcium	260	0.31	5.0		mg/L	5	5/2/2019 8:39:48 PM	B59599
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	5/6/2019 6:33:38 PM	C59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/2/2019 8:37:41 PM	B59599

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:58:00 AM
Lab ID: 1904E06-006
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Copper	ND	0.0013	0.0060		mg/L	1	5/2/2019 8:37:41 PM	B59599
Iron	0.31	0.0087	0.020	*	mg/L	1	5/2/2019 8:37:41 PM	B59599
Magnesium	69	0.050	1.0		mg/L	1	5/2/2019 8:37:41 PM	B59599
Manganese	0.34	0.00029	0.0020	*	mg/L	1	5/2/2019 8:37:41 PM	B59599
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/2/2019 8:37:41 PM	B59599
Nickel	0.0096	0.0040	0.010	J	mg/L	1	5/2/2019 8:37:41 PM	B59599
Potassium	230	0.81	5.0		mg/L	5	5/2/2019 8:39:48 PM	B59599
Silver	0.0044	0.00094	0.0050	J	mg/L	1	5/2/2019 8:37:41 PM	B59599
Sodium	1300	8.3	20		mg/L	20	5/6/2019 6:35:46 PM	C59669
Zinc	0.021	0.0023	0.010		mg/L	1	5/6/2019 6:33:38 PM	C59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.34	0.0025	0.020	*	mg/L	1	5/7/2019 6:36:52 PM	44753
Barium	0.24	0.00065	0.0020		mg/L	1	5/7/2019 6:36:52 PM	44753
Beryllium	0.00054	0.00028	0.0020	J	mg/L	1	5/7/2019 6:36:52 PM	44753
Boron	0.46	0.0045	0.040		mg/L	1	5/7/2019 6:36:52 PM	44753
Cadmium	ND	0.00074	0.0020		mg/L	1	5/7/2019 6:36:52 PM	44753
Chromium	0.0029	0.0015	0.0060	J	mg/L	1	5/8/2019 6:50:18 PM	44753
Cobalt	ND	0.0031	0.0060		mg/L	1	5/7/2019 6:36:52 PM	44753
Copper	0.0051	0.0041	0.0060	J	mg/L	1	5/7/2019 6:36:52 PM	44753
Iron	0.59	0.0087	0.020	*	mg/L	1	5/7/2019 6:36:52 PM	44753
Manganese	0.36	0.00029	0.0020	*	mg/L	1	5/7/2019 6:36:52 PM	44753
Molybdenum	0.0092	0.0067	0.0080		mg/L	1	5/8/2019 6:50:18 PM	44753
Nickel	0.012	0.0040	0.010		mg/L	1	5/7/2019 6:36:52 PM	44753
Silver	0.0051	0.0014	0.0050		mg/L	1	5/7/2019 6:36:52 PM	44753
Zinc	0.0093	0.0058	0.010	J	mg/L	1	5/8/2019 6:50:18 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 2:55:25 PM	C59847
Arsenic	0.0070	0.00050	0.0050		mg/L	5	5/10/2019 5:02:37 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 5:02:37 PM	A59775
Selenium	0.0080	0.00086	0.0050		mg/L	5	5/10/2019 5:02:37 PM	A59775
Thallium	0.00035	0.00024	0.0025	J	mg/L	5	5/10/2019 5:02:37 PM	A59775
Uranium	0.0016	0.00037	0.0025	J	mg/L	5	5/10/2019 5:02:37 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/9/2019 5:32:18 PM	44753
Arsenic	0.0084	0.0016	0.0050		mg/L	5	5/9/2019 5:32:18 PM	44753
Lead	ND	0.00027	0.0025		mg/L	5	5/9/2019 5:32:18 PM	44753
Selenium	0.0056	0.0024	0.0050		mg/L	5	5/14/2019 3:23:39 PM	44753
Thallium	ND	0.00026	0.0025		mg/L	5	5/9/2019 5:32:18 PM	44753

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:58:00 AM
Lab ID: 1904E06-006
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: METALS							Analyst: **DBK**	
Uranium	0.0020	0.00042	0.0025	J	mg/L	5	5/9/2019 5:32:18 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	5/9/2019 1:50:05 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	178	2.0	2.0		mg/L	1	5/6/2019 4:04:00 PM	44657
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	17329	10.00	10.00		MPN/100	10	5/1/2019 4:00:00 PM	44628
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Acenaphthylene	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Aniline	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Anthracene	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Azobenzene	ND	34	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Benz(a)anthracene	ND	26	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Benzo(a)pyrene	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Benzoic acid	55	32	100	J	µg/L	1	5/9/2019 6:39:58 PM	44729
Benzyl alcohol	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/9/2019 6:39:58 PM	44729
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Carbazole	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/9/2019 6:39:58 PM	44729
4-Chloroaniline	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2-Chloronaphthalene	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2-Chlorophenol	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Chrysene	ND	34	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Dibenzofuran	ND	34	50		µg/L	1	5/9/2019 6:39:58 PM	44729

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Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Diethyl phthalate	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Dimethyl phthalate	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/9/2019 6:39:58 PM	44729
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/9/2019 6:39:58 PM	44729
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/9/2019 6:39:58 PM	44729
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Fluoranthene	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Fluorene	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Hexachlorobenzene	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Hexachlorobutadiene	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Hexachloroethane	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Isophorone	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
1-Methylnaphthalene	ND	35	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2-Methylnaphthalene	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2-Methylphenol	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
3+4-Methylphenol	ND	27	50		µg/L	1	5/9/2019 6:39:58 PM	44729
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/9/2019 6:39:58 PM	44729
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/9/2019 6:39:58 PM	44729
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Naphthalene	ND	25	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2-Nitroaniline	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
3-Nitroaniline	ND	34	50		µg/L	1	5/9/2019 6:39:58 PM	44729
4-Nitroaniline	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Nitrobenzene	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2-Nitrophenol	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
4-Nitrophenol	ND	28	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Pentachlorophenol	ND	26	100		µg/L	1	5/9/2019 6:39:58 PM	44729
Phenanthrene	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Phenol	ND	30	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Pyrene	ND	33	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Pyridine	ND	27	50		µg/L	1	5/9/2019 6:39:58 PM	44729

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Collection Date: 4/30/2019 8:58:00 AM
Lab ID: 1904E06-006
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/9/2019 6:39:58 PM	44729
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/9/2019 6:39:58 PM	44729
Surr: 2-Fluorophenol	47.9	0	15-101		%Rec	1	5/9/2019 6:39:58 PM	44729
Surr: Phenol-d5	35.8	0	15-84.6		%Rec	1	5/9/2019 6:39:58 PM	44729
Surr: 2,4,6-Tribromophenol	58.2	0	27.8-112		%Rec	1	5/9/2019 6:39:58 PM	44729
Surr: Nitrobenzene-d5	59.5	0	33-113		%Rec	1	5/9/2019 6:39:58 PM	44729
Surr: 2-Fluorobiphenyl	41.5	0	26.6-107		%Rec	1	5/9/2019 6:39:58 PM	44729
Surr: 4-Terphenyl-d14	58.5	0	18.7-148		%Rec	1	5/9/2019 6:39:58 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Carbon disulfide	5.9	4.5	100	JD	µg/L	10	5/10/2019 6:59:55 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Chloromethane	ND	3.2	30	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810

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Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 6:59:55 PM	B59810
Surr: 1,2-Dichloroethane-d4	105	0	70-130	D	%Rec	10	5/10/2019 6:59:55 PM	B59810
Surr: 4-Bromofluorobenzene	97.0	0	70-130	D	%Rec	10	5/10/2019 6:59:55 PM	B59810
Surr: Dibromofluoromethane	94.7	0	70-130	D	%Rec	10	5/10/2019 6:59:55 PM	B59810

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 8:58:00 AM
Lab ID: 1904E06-006
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	99.9	0	70-130	D	%Rec	10	5/10/2019 6:59:55 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	8200	5.0	5.0		µmhos/c	1	4/30/2019 6:11:05 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	7.61			H	pH units	1	5/2/2019 11:41:46 AM	R59602

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-2
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 9:35:00 AM
Lab ID: 1904E06-007
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	38	1.0	2.0	*	mg/L	20	5/1/2019 4:31:13 AM	A59542
Chloride	1700	6.2	50		mg/L	100	5/10/2019 10:12:00 PM	R59816
Nitrogen, Nitrite (As N)	ND	0.019	0.50		mg/L	5	5/1/2019 4:18:48 AM	A59542
Bromide	0.55	0.073	0.50		mg/L	5	5/1/2019 4:18:48 AM	A59542
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/1/2019 4:18:48 AM	A59542
Phosphorus, Orthophosphate (As P)	ND	0.12	2.5		mg/L	5	5/1/2019 4:18:48 AM	A59542
Sulfate	1200	5.4	50		mg/L	100	5/10/2019 10:12:00 PM	R59816
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.10	0.0025	0.020		mg/L	1	5/2/2019 8:52:21 PM	B59599
Barium	0.25	0.00065	0.0020		mg/L	1	5/2/2019 8:52:21 PM	B59599
Beryllium	0.00037	0.00028	0.0020	J	mg/L	1	5/2/2019 8:52:21 PM	B59599
Boron	0.48	0.0045	0.040		mg/L	1	5/2/2019 8:52:21 PM	B59599
Cadmium	ND	0.00055	0.0020		mg/L	1	5/2/2019 8:52:21 PM	B59599
Calcium	210	0.31	5.0		mg/L	5	5/2/2019 8:54:28 PM	B59599
Chromium	0.0018	0.0015	0.0060	J	mg/L	1	5/6/2019 6:37:55 PM	C59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/2/2019 8:52:21 PM	B59599
Copper	ND	0.0013	0.0060		mg/L	1	5/2/2019 8:52:21 PM	B59599
Iron	0.30	0.0087	0.020		mg/L	1	5/2/2019 8:52:21 PM	B59599
Magnesium	56	0.050	1.0		mg/L	1	5/2/2019 8:52:21 PM	B59599
Manganese	0.27	0.00029	0.0020	*	mg/L	1	5/2/2019 8:52:21 PM	B59599
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/2/2019 8:52:21 PM	B59599
Nickel	0.0092	0.0040	0.010	J	mg/L	1	5/2/2019 8:52:21 PM	B59599
Potassium	190	0.81	5.0		mg/L	5	5/2/2019 8:54:28 PM	B59599
Silver	0.0036	0.00094	0.0050	J	mg/L	1	5/2/2019 8:52:21 PM	B59599
Sodium	1100	8.3	20		mg/L	20	5/6/2019 6:40:02 PM	C59669
Zinc	0.026	0.0023	0.010		mg/L	1	5/6/2019 6:37:55 PM	C59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.17	0.0025	0.020		mg/L	1	5/7/2019 6:49:52 PM	44753
Barium	0.25	0.00065	0.0020		mg/L	1	5/7/2019 6:49:52 PM	44753
Beryllium	0.00041	0.00028	0.0020	J	mg/L	1	5/7/2019 6:49:52 PM	44753
Boron	0.50	0.0045	0.040		mg/L	1	5/7/2019 6:49:52 PM	44753
Cadmium	ND	0.00074	0.0020		mg/L	1	5/7/2019 6:49:52 PM	44753
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	5/8/2019 6:52:34 PM	44753
Cobalt	ND	0.0031	0.0060		mg/L	1	5/7/2019 6:49:52 PM	44753
Copper	0.0057	0.0041	0.0060	J	mg/L	1	5/7/2019 6:49:52 PM	44753
Iron	0.53	0.0087	0.020	*	mg/L	1	5/7/2019 6:49:52 PM	44753
Manganese	0.29	0.00029	0.0020	*	mg/L	1	5/7/2019 6:49:52 PM	44753
Molybdenum	0.0084	0.0067	0.0080		mg/L	1	5/8/2019 6:52:34 PM	44753

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E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
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ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
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S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-2
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 9:35:00 AM
Lab ID: 1904E06-007
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	0.010	0.0040	0.010		mg/L	1	5/7/2019 6:49:52 PM	44753
Silver	0.0047	0.0014	0.0050	J	mg/L	1	5/7/2019 6:49:52 PM	44753
Zinc	0.012	0.0058	0.010		mg/L	1	5/14/2019 5:53:18 PM	44753
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 2:58:07 PM	C59847
Arsenic	0.0047	0.00050	0.0050	J	mg/L	5	5/10/2019 5:05:20 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 5:05:20 PM	A59775
Selenium	0.0049	0.00086	0.0050	J	mg/L	5	5/10/2019 5:05:20 PM	A59775
Thallium	ND	0.00024	0.0025		mg/L	5	5/10/2019 5:05:20 PM	A59775
Uranium	0.0014	0.00037	0.0025	J	mg/L	5	5/10/2019 5:05:20 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/9/2019 5:34:30 PM	44753
Arsenic	0.0068	0.0016	0.0050		mg/L	5	5/9/2019 5:34:30 PM	44753
Lead	ND	0.00027	0.0025		mg/L	5	5/9/2019 5:34:30 PM	44753
Selenium	0.0082	0.0024	0.0050		mg/L	5	5/14/2019 3:30:16 PM	44753
Thallium	ND	0.00026	0.0025		mg/L	5	5/9/2019 5:34:30 PM	44753
Uranium	0.0021	0.00042	0.0025	J	mg/L	5	5/9/2019 5:34:30 PM	44753
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000088	0.000038	0.00020	J	mg/L	1	5/9/2019 1:52:16 PM	44812
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	515	2.0	2.0	R	mg/L	1	5/6/2019 4:04:00 PM	44657
NOTES: R - RPD between dilutions >30%.								
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **plr**	
E. Coli	>24196	10.00	10.00		MPN/100	10	5/1/2019 4:00:00 PM	44628
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Acenaphthylene	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Aniline	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Anthracene	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Azobenzene	ND	34	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Benz(a)anthracene	ND	26	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Benzo(a)pyrene	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-2
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 9:35:00 AM
Lab ID: 1904E06-007
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	110	32	100		µg/L	1	5/9/2019 7:09:44 PM	44729
Benzyl alcohol	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/9/2019 7:09:44 PM	44729
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Carbazole	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/9/2019 7:09:44 PM	44729
4-Chloroaniline	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2-Chloronaphthalene	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2-Chlorophenol	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Chrysene	ND	34	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Dibenzofuran	ND	34	50		µg/L	1	5/9/2019 7:09:44 PM	44729
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Diethyl phthalate	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Dimethyl phthalate	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/9/2019 7:09:44 PM	44729
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/9/2019 7:09:44 PM	44729
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/9/2019 7:09:44 PM	44729
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Fluoranthene	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Fluorene	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Hexachlorobenzene	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Hexachlorobutadiene	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Hexachloroethane	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Isophorone	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-2
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 9:35:00 AM
Lab ID: 1904E06-007
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	35	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2-Methylnaphthalene	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2-Methylphenol	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
3+4-Methylphenol	59	27	50		µg/L	1	5/9/2019 7:09:44 PM	44729
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/9/2019 7:09:44 PM	44729
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/9/2019 7:09:44 PM	44729
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Naphthalene	ND	25	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2-Nitroaniline	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
3-Nitroaniline	ND	34	50		µg/L	1	5/9/2019 7:09:44 PM	44729
4-Nitroaniline	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Nitrobenzene	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2-Nitrophenol	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
4-Nitrophenol	ND	28	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Pentachlorophenol	ND	26	100		µg/L	1	5/9/2019 7:09:44 PM	44729
Phenanthrene	ND	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Phenol	64	30	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Pyrene	ND	33	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Pyridine	ND	27	50		µg/L	1	5/9/2019 7:09:44 PM	44729
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/9/2019 7:09:44 PM	44729
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/9/2019 7:09:44 PM	44729
Surr: 2-Fluorophenol	47.8	0	15-101		%Rec	1	5/9/2019 7:09:44 PM	44729
Surr: Phenol-d5	34.5	0	15-84.6		%Rec	1	5/9/2019 7:09:44 PM	44729
Surr: 2,4,6-Tribromophenol	53.3	0	27.8-112		%Rec	1	5/9/2019 7:09:44 PM	44729
Surr: Nitrobenzene-d5	61.5	0	33-113		%Rec	1	5/9/2019 7:09:44 PM	44729
Surr: 2-Fluorobiphenyl	44.8	0	26.6-107		%Rec	1	5/9/2019 7:09:44 PM	44729
Surr: 4-Terphenyl-d14	54.5	0	18.7-148		%Rec	1	5/9/2019 7:09:44 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Toluene	ND	3.5	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Ethylbenzene	ND	1.3	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Methyl tert-butyl ether (MTBE)	ND	4.6	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2,4-Trimethylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,3,5-Trimethylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2-Dichloroethane (EDC)	ND	1.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2-Dibromoethane (EDB)	ND	1.7	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Naphthalene	ND	2.8	20	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1-Methylnaphthalene	ND	3.1	40	D	µg/L	10	5/10/2019 7:29:02 PM	B59810

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-2
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 9:35:00 AM
Lab ID: 1904E06-007
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
2-Methylnaphthalene	ND	3.5	40	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Acetone	ND	12	100	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Bromobenzene	ND	2.4	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Bromodichloromethane	ND	1.3	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Bromoform	ND	2.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Bromomethane	ND	2.7	30	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
2-Butanone	ND	21	100	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Carbon disulfide	4.9	4.5	100	JD	µg/L	10	5/10/2019 7:29:02 PM	B59810
Carbon Tetrachloride	ND	1.4	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Chlorobenzene	ND	1.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Chloroethane	ND	1.8	20	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Chloroform	ND	1.2	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Chloromethane	ND	3.2	30	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
2-Chlorotoluene	ND	2.5	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
4-Chlorotoluene	ND	2.3	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
cis-1,2-DCE	ND	1.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
cis-1,3-Dichloropropene	ND	1.4	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2-Dibromo-3-chloropropane	ND	3.3	20	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Dibromochloromethane	ND	2.4	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Dibromomethane	ND	2.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2-Dichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,3-Dichlorobenzene	ND	2.5	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,4-Dichlorobenzene	ND	2.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Dichlorodifluoromethane	ND	2.6	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,1-Dichloroethane	ND	1.4	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,1-Dichloroethene	ND	2.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2-Dichloropropane	ND	2.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,3-Dichloropropane	ND	2.0	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
2,2-Dichloropropane	ND	2.3	20	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Hexachlorobutadiene	ND	3.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
2-Hexanone	ND	15	100	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Isopropylbenzene	ND	1.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
4-Isopropyltoluene	ND	2.2	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Methylene Chloride	ND	1.5	30	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
n-Butylbenzene	ND	2.3	30	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
n-Propylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
sec-Butylbenzene	ND	2.5	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EP-2
Project: SEMI ANNUAL PONDS
Collection Date: 4/30/2019 9:35:00 AM
Lab ID: 1904E06-007
Matrix: AQUEOUS
Received Date: 4/30/2019 2:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Styrene	ND	1.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
tert-Butylbenzene	ND	2.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,1,1,2-Tetrachloroethane	ND	2.1	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,1,2,2-Tetrachloroethane	ND	5.5	20	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
trans-1,3-Dichloropropene	ND	1.7	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2,3-Trichlorobenzene	ND	3.0	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2,4-Trichlorobenzene	ND	2.0	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,1,1-Trichloroethane	ND	1.7	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,1,2-Trichloroethane	ND	2.2	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Trichloroethene (TCE)	ND	1.7	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Trichlorofluoromethane	ND	1.9	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
1,2,3-Trichloropropane	ND	3.0	20	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Xylenes, Total	ND	4.5	15	D	µg/L	10	5/10/2019 7:29:02 PM	B59810
Surr: 1,2-Dichloroethane-d4	108	0	70-130	D	%Rec	10	5/10/2019 7:29:02 PM	B59810
Surr: 4-Bromofluorobenzene	99.8	0	70-130	D	%Rec	10	5/10/2019 7:29:02 PM	B59810
Surr: Dibromofluoromethane	98.3	0	70-130	D	%Rec	10	5/10/2019 7:29:02 PM	B59810
Surr: Toluene-d8	96.9	0	70-130	D	%Rec	10	5/10/2019 7:29:02 PM	B59810
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	7100	5.0	5.0		µmhos/c	1	4/30/2019 6:15:08 PM	R59563
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	8.03			H	pH units	1	5/2/2019 11:45:48 AM	R59602

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

Qualifiers:

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

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	618		10.0	1	05/06/2019 15:43	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	800		10.0	1	05/06/2019 15:43	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	683		10.0	1	05/06/2019 15:44	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	698		10.0	1	05/06/2019 15:45	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	738		50.0	5	05/07/2019 22:48	WG1277222

Method Blank (MB)

(MB) R3408589-1 05/06/19 15:30

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1094425-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1094425-01 05/06/19 15:39 • (DUP) R3408589-3 05/06/19 15:39

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	ND	0.000	1	0.000		20

L1095316-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1095316-01 05/06/19 15:50 • (DUP) R3408589-6 05/06/19 15:50

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3408589-2 05/06/19 15:39

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
COD	222	205	92.2	90.0-110	

L1094597-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1094597-01 05/06/19 15:47 • (MS) R3408589-4 05/06/19 15:47 • (MSD) R3408589-5 05/06/19 15:47

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	81.1	492	498	103	104	1	80.0-120			1.16	20

Method Blank (MB)

(MB) R3409047-1 05/07/19 22:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1094326-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1094326-01 05/07/19 22:46 • (DUP) R3409047-3 05/07/19 22:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	75.0	74.7	1	0.437		20

L1095644-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1095644-01 05/07/19 22:52 • (DUP) R3409047-6 05/07/19 22:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	56.3	56.1	1	0.217		20

Laboratory Control Sample (LCS)

(LCS) R3409047-2 05/07/19 22:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	203	91.3	90.0-110	

L1094764-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1094764-03 05/07/19 22:49 • (MS) R3409047-4 05/07/19 22:49 • (MSD) R3409047-5 05/07/19 22:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	ND	380	380	95.1	95.0	1	80.0-120			0.0447	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **B59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008544** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **B59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	104	50	150			J
Barium	0.0018	0.0020	0.002000	0	92.0	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	99.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	92.5	50	150			J
Calcium	0.51	1.0	0.5000	0	103	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Cobalt	0.0049	0.0060	0.006000	0	81.8	50	150			J
Copper	0.0050	0.0060	0.006000	0	83.9	50	150			J
Iron	0.022	0.020	0.02000	0	112	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0073	0.0080	0.008000	0	90.9	50	150			J
Nickel	0.0067	0.010	0.005000	0	134	50	150			J
Potassium	0.51	1.0	0.5000	0	103	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.0	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **B59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0056	0.010	0.005000	0	112	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **B59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008548** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	113	85	115			
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Beryllium	0.51	0.0020	0.5000	0	101	85	115			
Boron	0.50	0.040	0.5000	0	99.5	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	51	1.0	50.00	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.1	85	115			
Cobalt	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Molybdenum	0.50	0.0080	0.5000	0	100	85	115			
Nickel	0.49	0.010	0.5000	0	98.5	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.097	0.0050	0.1000	0	97.3	85	115			
Zinc	0.50	0.010	0.5000	0	99.7	85	115			

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011990** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0056	0.0060	0.006000	0	92.6	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.63	1.0	0.5000	0	127	50	150			J
Zinc	0.0055	0.010	0.005000	0	109	50	150			J

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011997** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.48	0.0060	0.5000	0	95.2	85	115			
Sodium	52	1.0	50.00	0	104	85	115			
Zinc	0.49	0.010	0.5000	0	97.9	85	115			

Sample ID: **MB-44753**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44753**	RunNo: **59705**
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2013012** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0042	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	0.00047	0.0020								J
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-44753**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44753**	RunNo: **59705**
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2013017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.015	0.020	0.01000	0	149	50	150			J
Barium	0.0020	0.0020	0.002000	0	102	50	150			
Beryllium	0.0022	0.0020	0.002000	0	108	50	150			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **LLLCS-44753** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **44753** RunNo: **59705**
Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.042	0.040	0.04000	0	105	50	150			
Cadmium	0.0019	0.0020	0.002000	0	94.3	50	150			J
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0065	0.0060	0.006000	0	109	50	150			
Copper	0.0071	0.0060	0.006000	0	118	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Manganese	0.0024	0.0020	0.002000	0	118	50	150			
Molybdenum	0.0079	0.0080	0.008000	0	98.6	50	150			J
Nickel	0.0057	0.010	0.005000	0	114	50	150			J
Silver	0.0056	0.0050	0.005000	0	112	50	150			

Sample ID: **LCS-44753** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **44753** RunNo: **59705**
Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013019** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Beryllium	0.51	0.0020	0.5000	0	102	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.3	85	115			
Cobalt	0.49	0.0060	0.5000	0	97.8	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Molybdenum	0.50	0.0080	0.5000	0	99.9	85	115			
Nickel	0.49	0.010	0.5000	0	97.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID: **LLLCS-44753** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **44753** RunNo: **59705**
Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.014	0.010	0.01000	0	136	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB-44753**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44753**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014380** Units: **mg/L**

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

Sample ID: **LCS-44753**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **44753**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014382** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID: **LLLCS-44753**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44753**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014383** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.013	0.010	0.01000	0	126	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008545** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B59599**	RunNo: **59599**
Prep Date:	Analysis Date: **5/2/2019**	SeqNo: **2008547** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	104	50	150			J
Barium	0.0018	0.0020	0.002000	0	92.0	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	99.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	92.5	50	150			J
Calcium	0.51	1.0	0.5000	0	103	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Cobalt	0.0049	0.0060	0.006000	0	81.8	50	150			J
Copper	0.0050	0.0060	0.006000	0	83.9	50	150			J
Iron	0.022	0.020	0.02000	0	112	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0073	0.0080	0.008000	0	90.9	50	150			J
Nickel	0.0067	0.010	0.005000	0	134	50	150			J
Potassium	0.51	1.0	0.5000	0	103	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.0	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **B59599** RunNo: **59599**

Prep Date: Analysis Date: **5/2/2019** SeqNo: **2008547** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0056	0.010	0.005000	0	112	50	150			J

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **LCSW** Batch ID: **B59599** RunNo: **59599**

Prep Date: Analysis Date: **5/2/2019** SeqNo: **2008549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	113	85	115			
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Beryllium	0.51	0.0020	0.5000	0	101	85	115			
Boron	0.50	0.040	0.5000	0	99.5	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	51	1.0	50.00	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.1	85	115			
Cobalt	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Molybdenum	0.50	0.0080	0.5000	0	100	85	115			
Nickel	0.49	0.010	0.5000	0	98.5	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.097	0.0050	0.1000	0	97.3	85	115			
Zinc	0.50	0.010	0.5000	0	99.7	85	115			

Sample ID: **1904E06-004HMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **EP-4** Batch ID: **C59669** RunNo: **59669**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011933** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.44	0.0060	0.5000	0.001679	87.1	70	130			
Zinc	0.47	0.010	0.5000	0.01915	89.3	70	130			

Sample ID: **1904E06-004HMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **EP-4** Batch ID: **C59669** RunNo: **59669**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011934** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.44	0.0060	0.5000	0.001679	87.2	70	130	0.142	20	
Zinc	0.47	0.010	0.5000	0.01915	89.3	70	130	0.0343	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **1904E06-005HMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EP-3**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.45	0.0060	0.5000	0.001588	90.6	70	130			
Zinc	0.50	0.010	0.5000	0.04490	91.0	70	130			

Sample ID: **1904E06-005HMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EP-3**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011941** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.44	0.0060	0.5000	0.001588	86.8	70	130	4.30	20	
Zinc	0.48	0.010	0.5000	0.04490	87.4	70	130	3.68	20	

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011991** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011996** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0056	0.0060	0.006000	0	92.6	50	150			J
Sodium	0.63	1.0	0.5000	0	127	50	150			J
Zinc	0.0055	0.010	0.005000	0	109	50	150			J

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011998** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.48	0.0060	0.5000	0	95.2	85	115			
Sodium	52	1.0	50.00	0	104	85	115			
Zinc	0.49	0.010	0.5000	0	97.9	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB-44753**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **44753**	RunNo: **59761**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015800** Units: **mg/L**

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

Sample ID: **MSLLLCS-44753**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **44753**	RunNo: **59761**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015802** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	111	50	150			
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.9	50	150			J
Selenium	0.00065	0.0010	0.001000	0	65.0	50	150			J
Thallium	0.00042	0.00050	0.0005000	0	84.6	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	88.0	50	150			J

Sample ID: **MSLCS-44753**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **44753**	RunNo: **59761**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015804** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	106	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.0	85	115			
Lead	0.012	0.00050	0.01250	0	97.2	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			
Thallium	0.012	0.00050	0.01250	0	95.9	85	115			
Uranium	0.011	0.00050	0.01250	0	90.4	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59775**	RunNo: **59775**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017121** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59775**	RunNo: **59775**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.1	85	115			
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Lead	0.012	0.00050	0.01250	0	96.2	85	115			
Selenium	0.025	0.0010	0.02500	0	98.1	85	115			
Thallium	0.012	0.00050	0.01250	0	96.7	85	115			
Uranium	0.012	0.00050	0.01250	0	93.5	85	115			

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59775**	RunNo: **59775**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017126** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00078	0.0010	0.001000	0	78.2	50	150			J
Arsenic	0.00094	0.0010	0.001000	0	93.8	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.2	50	150			J
Selenium	0.00088	0.0010	0.001000	0	87.7	50	150			J
Thallium	0.00029	0.00050	0.0005000	0	58.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.2	50	150			J

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C59847**	RunNo: **59847**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018732** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59847**	RunNo: **59847**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.0	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C59847**	RunNo: **59847**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.2	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB-44812**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44812**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015293** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000048	0.00020								J

Sample ID: **LCS-44812**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44812**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0043	0.00020	0.005000	0	85.8	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A59542**	RunNo: **59542**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2006201** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A59542**	RunNo: **59542**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2006202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	94.6	90	110			
Bromide	2.4	0.10	2.500	0	95.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.0	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.9	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R59816**	RunNo: **59816**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017466** Units: **mg/L**

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

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59816**	RunNo: **59816**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017467** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	9.7	0.50	10.00	0	97.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **MB-44636** SampType: **MBLK** TestCode: **EPA Method 8081: PESTICIDES**

Client ID: **PBW** Batch ID: **44636** RunNo: **59673**

Prep Date: **5/1/2019** Analysis Date: **5/6/2019** SeqNo: **2012054** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	ND	0.10								
4,4´-DDE	ND	0.10								
4,4´-DDT	ND	0.12								
Aldrin	ND	0.10								
alpha-BHC	ND	0.10								
beta-BHC	ND	0.10								
Chlordane	ND	1.0								
delta-BHC	ND	0.10								
Dieldrin	ND	0.10								
Endosulfan I	ND	0.10								
Endosulfan II	ND	0.10								
Endosulfan sulfate	ND	0.10								
Endrin	ND	0.12								
Endrin aldehyde	ND	0.10								
gamma-BHC	ND	0.10								
Heptachlor	ND	0.10								
Heptachlor epoxide	ND	0.10								
Methoxychlor	ND	0.12								
Toxaphene	ND	1.0								
Surr: Decachlorobiphenyl	2.0		2.500		78.9	29.4	99.8			
Surr: Tetrachloro-m-xylene	2.0		2.500		78.7	20.7	100			

Sample ID: **LCS-44636** SampType: **LCS** TestCode: **EPA Method 8081: PESTICIDES**

Client ID: **LCSW** Batch ID: **44636** RunNo: **59673**

Prep Date: **5/1/2019** Analysis Date: **5/6/2019** SeqNo: **2012056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	0.42	0.10	0.5000	0	84.7	48.8	145			
4,4´-DDE	0.39	0.10	0.5000	0	78.8	48.5	139			
4,4´-DDT	0.39	0.12	0.5000	0	79.0	44.7	138			
Aldrin	0.40	0.10	0.5000	0	79.3	29.4	145			
alpha-BHC	0.42	0.10	0.5000	0	84.3	45.4	146			
beta-BHC	0.43	0.10	0.5000	0	85.9	54.6	146			
delta-BHC	0.41	0.10	0.5000	0	81.4	51.6	141			
Dieldrin	0.41	0.10	0.5000	0	81.7	42.7	151			
Endosulfan I	0.39	0.10	0.5000	0	77.4	35.8	132			
Endosulfan II	0.40	0.10	0.5000	0	79.6	43.7	129			
Endosulfan sulfate	0.41	0.10	0.5000	0	82.5	46.2	148			
Endrin	0.43	0.12	0.5000	0	85.3	51.8	142			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **LCS-44636**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**							
Client ID: **LCSW**	Batch ID: **44636**	RunNo: **59673**							
Prep Date: **5/1/2019**	Analysis Date: **5/6/2019**	SeqNo: **2012056**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin aldehyde	0.40	0.10	0.5000	0	79.3	32.7	158			
gamma-BHC	0.42	0.10	0.5000	0	83.7	45.9	146			
Heptachlor	0.41	0.10	0.5000	0	82.0	33.1	147			
Heptachlor epoxide	0.42	0.10	0.5000	0	84.9	49.9	144			
Methoxychlor	0.40	0.12	0.5000	0	80.1	15	198			
Surr: Decachlorobiphenyl	2.0		2.500		81.3	29.4	99.8			
Surr: Tetrachloro-m-xylene	1.8		2.500		71.9	20.7	100			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59810**	RunNo: **59810**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017074** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59810**	RunNo: **59810**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017074** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Sample ID: **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B59810**	RunNo: **59810**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.8	70	130			
Toluene	17	1.0	20.00	0	86.6	70	130			
Chlorobenzene	18	1.0	20.00	0	91.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **100ng lcsb** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **B59810** RunNo: **59810**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	89.5	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.2	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.1	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	9.2		10.00		92.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **mb-44729**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44729**	RunNo: **59772**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015703** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **mb-44729**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44729**	RunNo: **59772**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015703** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		61.6	15	101			
Surr: Phenol-d5	90		200.0		44.8	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		72.6	27.8	112			
Surr: Nitrobenzene-d5	79		100.0		78.9	33	113			
Surr: 2-Fluorobiphenyl	59		100.0		58.8	26.6	107			
Surr: 4-Terphenyl-d14	73		100.0		73.2	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **lcs-44729** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **44729** RunNo: **59772**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015704** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	46	10	100.0	0	46.5	32.2	94			
4-Chloro-3-methylphenol	120	10	200.0	0	59.3	37.7	101			
2-Chlorophenol	120	10	200.0	0	59.8	32.6	90.1			
1,4-Dichlorobenzene	34	10	100.0	0	34.3	30	87.2			
2,4-Dinitrotoluene	47	10	100.0	0	46.7	35.9	85.8			
N-Nitrosodi-n-propylamine	61	10	100.0	0	61.3	37.1	108			
4-Nitrophenol	61	10	200.0	0	30.7	22.4	86.6			
Pentachlorophenol	75	20	200.0	0	37.7	31.6	91			
Phenol	70	10	200.0	0	35.2	21.7	84.9			
Pyrene	54	10	100.0	0	53.5	46.3	103			
1,2,4-Trichlorobenzene	40	10	100.0	0	40.0	30.2	88.3			
Surr: 2-Fluorophenol	93		200.0		46.4	15	101			
Surr: Phenol-d5	67		200.0		33.3	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		60.5	27.8	112			
Surr: Nitrobenzene-d5	58		100.0		57.7	33	113			
Surr: 2-Fluorobiphenyl	42		100.0		42.4	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		62.7	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **MB-44657** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **44657** RunNo: **59679**
Prep Date: **5/1/2019** Analysis Date: **5/6/2019** SeqNo: **2012207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-44657** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **44657** RunNo: **59679**
Prep Date: **5/1/2019** Analysis Date: **5/6/2019** SeqNo: **2012208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	166	2.0	198.0	0	83.8	84.6	115.4			S

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**
22-May-19

Client: MARATHON GALLUP
Project: SEMI ANNUAL PONDS

Sample ID: **MB-44628**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **44628**	RunNo: **59567**
Prep Date: **4/30/2019**	Analysis Date: **5/1/2019**	SeqNo: **2007160** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904E06**

22-May-19

Client: MARATHON GALLUP

Project: SEMI ANNUAL PONDS

Sample ID: **lcs-1 99.0uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R59563**	RunNo: **59563**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2007012** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	5.0	99.00	0	102	85	115			

Sample ID: **lcs-2 99.0uS eC**	SampType: **LCS**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R59563**	RunNo: **59563**
Prep Date:	Analysis Date: **4/30/2019**	SeqNo: **2007038** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	5.0	99.00	0	103	85	115			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1904E06** RcptNo: **1**

Received By: **Isaiah Ortiz** **4/30/2019 11:00:00 AM** I-OK

Completed By: **Erin Melendrez** **4/30/2019 3:07:35 PM**

Reviewed By: YG 4/30/19 @1554

Labeled by: JJC 4-30-19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑ JJC 4-30-19	No ☑	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 20 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JJC 4-30-19

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 4/30/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good	Yes			
2	0.1	Good	Yes			

Chain-of-Custody Record

Client: MARATHON

Gallup Refinery

Mailing Address:

92 GIANT CROSSING RD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard Rush_____

Project Name:

SEMI-ANNUAL PONDS

Project #:

PONDS 5,4,3,2

Project Manager:

CAJOHNSON1@MARATHONPETROLEUM.COM

BMOORE1@MARATHONPETROLEUM.COM

Sampler: C JOHNSON

On Ice: ☒ Yes ☐ No 0.3-0.2°

Sample Temperature: 0.2+0.2°(CF) 0.7°(CF) 0.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1904E06	Analysis Request: 8260+MTBE	8270	WQCC METALS - TOTAL	WQCC METALS - DISS (FILTERE	GEN CHEM (pH, Spec Cond, Major Cations/Anions, NITRATE/NITRITE)		BOD	COD	E-COLI	8081 - PESTICIDES						Air Bubbles (Y or N)
4/30/2019	700	Aqueous	TRIP BLANK	MISC	MISC	-001	X	*	A	04/30/19												
4/30/2019	700	Aqueous	FIELD BLANK	MISC	MISC	-002	X	*														
4/30/2019	730	Aqueous	EP-5	MISC	MISC	-003	X	X	X	X	X		X	X	X							
4/30/2019	800	Aqueous	EP-4	MISC	MISC	-004	X	X	X	X	X		X	X	X							
4/30/2019	850	Aqueous	EP-3	MISC	MISC	-005	X	X	X	X	X		X	X	X	X						
4/30/2019	858	Aqueous	DUPLICATE	MISC	MISC	-006	X	X	X	X	X		X	X	X	X						
4/30/2019	935	Aqueous	EP-2	MISC	MISC	-007	X	X	X	X	X		X	X	X							

Date	Time	Relinquished by:	Received by:	Date	Time
4/30/19	1100		I-Con courier	4/30/19	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	618		10.0	1	05/06/2019 15:43	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	800		10.0	1	05/06/2019 15:43	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	683		10.0	1	05/06/2019 15:44	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	698		10.0	1	05/06/2019 15:45	WG1276497

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	738		50.0	5	05/07/2019 22:48	WG1277222

Method Blank (MB)

(MB) R3408589-1 05/06/19 15:30

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1094425-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1094425-01 05/06/19 15:39 • (DUP) R3408589-3 05/06/19 15:39

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	ND	0.000	1	0.000		20

L1095316-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1095316-01 05/06/19 15:50 • (DUP) R3408589-6 05/06/19 15:50

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3408589-2 05/06/19 15:39

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
COD	222	205	92.2	90.0-110	

L1094597-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1094597-01 05/06/19 15:47 • (MS) R3408589-4 05/06/19 15:47 • (MSD) R3408589-5 05/06/19 15:47

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	81.1	492	498	103	104	1	80.0-120			1.16	20

Method Blank (MB)

(MB) R3409047-1 05/07/19 22:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1094326-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1094326-01 05/07/19 22:46 • (DUP) R3409047-3 05/07/19 22:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	75.0	74.7	1	0.437		20

L1095644-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1095644-01 05/07/19 22:52 • (DUP) R3409047-6 05/07/19 22:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	56.3	56.1	1	0.217		20

Laboratory Control Sample (LCS)

(LCS) R3409047-2 05/07/19 22:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	203	91.3	90.0-110	

L1094764-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1094764-03 05/07/19 22:49 • (MS) R3409047-4 05/07/19 22:49 • (MSD) R3409047-5 05/07/19 22:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	ND	380	380	95.1	95.0	1	80.0-120			0.0447	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 22, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX:

RE: 2019 2nd QTR GW Sampling OrderNo.: 1905120

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 5/2/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 7:00:00 AM
Lab ID: 1905120-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Toluene	ND	0.35	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Naphthalene	ND	0.28	2.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Acetone	ND	1.2	10		µg/L	1	5/3/2019 5:39:10 PM	R59627
Bromobenzene	ND	0.24	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Bromoform	ND	0.29	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Bromomethane	ND	0.27	3.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
2-Butanone	ND	2.1	10		µg/L	1	5/3/2019 5:39:10 PM	R59627
Carbon disulfide	ND	0.45	10		µg/L	1	5/3/2019 5:39:10 PM	R59627
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Chloroethane	ND	0.18	2.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Chloroform	ND	0.12	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Chloromethane	ND	0.32	3.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Dibromomethane	ND	0.21	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/3/2019 5:39:10 PM	R59627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 7:00:00 AM
Lab ID: 1905120-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
2-Hexanone	ND	1.5	10		µg/L	1	5/3/2019 5:39:10 PM	R59627
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/3/2019 5:39:10 PM	R59627
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Styrene	ND	0.19	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/3/2019 5:39:10 PM	R59627
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/3/2019 5:39:10 PM	R59627
Surr: 1,2-Dichloroethane-d4	91.7	0	70-130		%Rec	1	5/3/2019 5:39:10 PM	R59627
Surr: 4-Bromofluorobenzene	96.2	0	70-130		%Rec	1	5/3/2019 5:39:10 PM	R59627
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	5/3/2019 5:39:10 PM	R59627
Surr: Toluene-d8	92.0	0	70-130		%Rec	1	5/3/2019 5:39:10 PM	R59627

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Sampling
Collection Date:
Lab ID: 1905120-002
Matrix: TRIP BLANK
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Toluene	ND	0.35	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Naphthalene	ND	0.28	2.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Acetone	ND	1.2	10		µg/L	1	5/3/2019 6:07:56 PM	R59627
Bromobenzene	ND	0.24	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Bromoform	ND	0.29	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Bromomethane	ND	0.27	3.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
2-Butanone	ND	2.1	10		µg/L	1	5/3/2019 6:07:56 PM	R59627
Carbon disulfide	ND	0.45	10		µg/L	1	5/3/2019 6:07:56 PM	R59627
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Chloroethane	ND	0.18	2.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Chloroform	ND	0.12	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Chloromethane	ND	0.32	3.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Dibromomethane	ND	0.21	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/3/2019 6:07:56 PM	R59627

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Qualifiers:

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D	Sample Diluted Due to Matrix
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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Sampling
Collection Date:
Lab ID: 1905120-002
Matrix: TRIP BLANK
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
2-Hexanone	ND	1.5	10		µg/L	1	5/3/2019 6:07:56 PM	R59627
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/3/2019 6:07:56 PM	R59627
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Styrene	ND	0.19	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/3/2019 6:07:56 PM	R59627
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/3/2019 6:07:56 PM	R59627
Surr: 1,2-Dichloroethane-d4	93.3	0	70-130		%Rec	1	5/3/2019 6:07:56 PM	R59627
Surr: 4-Bromofluorobenzene	97.8	0	70-130		%Rec	1	5/3/2019 6:07:56 PM	R59627
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	5/3/2019 6:07:56 PM	R59627
Surr: Toluene-d8	95.2	0	70-130		%Rec	1	5/3/2019 6:07:56 PM	R59627

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 10:19:00 AM
Lab ID: 1905120-003
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/6/2019 9:33:57 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.4	0.35	1.0		mg/L	1	5/3/2019 10:02:41 PM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2019 10:02:41 PM	44702
Surr: DNOP	108	0	70-130		%Rec	1	5/3/2019 10:02:41 PM	44702
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/6/2019 3:09:31 PM	B59669
Barium	2.2	0.0032	0.010	*	mg/L	5	5/6/2019 3:11:34 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 3:09:31 PM	B59669
Boron	0.47	0.0045	0.040		mg/L	1	5/6/2019 3:09:31 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 3:09:31 PM	B59669
Calcium	79	0.062	1.0		mg/L	1	5/6/2019 3:09:31 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 3:09:31 PM	B59669
Cobalt	0.015	0.0031	0.0060		mg/L	1	5/6/2019 3:09:31 PM	B59669
Copper	ND	0.0013	0.0060		mg/L	1	5/6/2019 3:09:31 PM	B59669
Iron	4.7	0.044	0.10	*	mg/L	5	5/6/2019 3:11:34 PM	B59669
Magnesium	22	0.050	1.0		mg/L	1	5/6/2019 3:09:31 PM	B59669
Manganese	2.0	0.0014	0.010	*	mg/L	5	5/6/2019 3:11:34 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 3:09:31 PM	B59669
Nickel	0.19	0.0040	0.010	*	mg/L	1	5/6/2019 3:09:31 PM	B59669
Potassium	0.18	0.16	1.0	J	mg/L	1	5/6/2019 3:09:31 PM	B59669
Silver	ND	0.00094	0.0050		mg/L	1	5/6/2019 3:09:31 PM	B59669
Sodium	330	2.1	5.0		mg/L	5	5/6/2019 3:11:34 PM	B59669
Zinc	0.095	0.0023	0.010		mg/L	1	5/6/2019 3:09:31 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/8/2019 6:03:29 PM	44734
Barium	2.4	0.0032	0.010	*	mg/L	5	5/8/2019 6:05:33 PM	44734
Beryllium	ND	0.00028	0.0020		mg/L	1	5/8/2019 6:03:29 PM	44734
Boron	0.51	0.0045	0.040		mg/L	1	5/8/2019 6:03:29 PM	44734
Cadmium	ND	0.00074	0.0020		mg/L	1	5/8/2019 6:03:29 PM	44734
Chromium	ND	0.0015	0.0060		mg/L	1	5/8/2019 6:03:29 PM	44734
Cobalt	0.015	0.0031	0.0060		mg/L	1	5/8/2019 6:03:29 PM	44734
Copper	ND	0.0041	0.0060		mg/L	1	5/8/2019 6:03:29 PM	44734
Iron	4.7	0.087	0.20	*	mg/L	10	5/9/2019 5:29:09 PM	44734
Manganese	2.1	0.0014	0.010	*	mg/L	5	5/8/2019 6:05:33 PM	44734
Molybdenum	0.0086	0.0067	0.0080		mg/L	1	5/8/2019 6:03:29 PM	44734
Nickel	0.20	0.0040	0.010	*	mg/L	1	5/8/2019 6:03:29 PM	44734
Silver	ND	0.0014	0.0050		mg/L	1	5/8/2019 6:03:29 PM	44734

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

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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 10:19:00 AM
Lab ID: 1905120-003
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	5/8/2019 6:03:29 PM	44734
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 4:51:22 PM	B59666
Arsenic	0.0049	0.00010	0.0010		mg/L	1	5/6/2019 4:51:22 PM	B59666
Lead	0.000057	0.000055	0.00050	J	mg/L	1	5/6/2019 4:51:22 PM	B59666
Selenium	0.00018	0.00017	0.0010	J	mg/L	1	5/6/2019 4:51:22 PM	B59666
Thallium	ND	0.000048	0.00050		mg/L	1	5/6/2019 4:51:22 PM	B59666
Uranium	0.0026	0.000075	0.00050		mg/L	1	5/8/2019 1:49:25 PM	A59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/7/2019 1:18:26 PM	44734
Arsenic	0.0051	0.00031	0.0010		mg/L	1	5/7/2019 1:18:26 PM	44734
Lead	0.000081	0.000055	0.00050	J	mg/L	1	5/7/2019 1:18:26 PM	44734
Selenium	ND	0.00048	0.0010		mg/L	1	5/7/2019 1:18:26 PM	44734
Thallium	ND	0.000052	0.00050		mg/L	1	5/7/2019 1:18:26 PM	44734
Uranium	0.0026	0.000085	0.00050		mg/L	1	5/7/2019 1:18:26 PM	44734
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/7/2019 11:33:27 AM	44742
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	16000	83	500		µg/L	500	5/3/2019 6:36:24 PM	R59627
Toluene	ND	18	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Ethylbenzene	710	6.6	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Methyl tert-butyl ether (MTBE)	730	23	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2,4-Trimethylbenzene	14	11	50	J	µg/L	50	5/3/2019 7:04:55 PM	R59627
1,3,5-Trimethylbenzene	ND	9.4	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2-Dichloroethane (EDC)	ND	9.7	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2-Dibromoethane (EDB)	ND	8.3	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Naphthalene	24	14	100	J	µg/L	50	5/3/2019 7:04:55 PM	R59627
1-Methylnaphthalene	32	16	200	J	µg/L	50	5/3/2019 7:04:55 PM	R59627
2-Methylnaphthalene	ND	17	200		µg/L	50	5/3/2019 7:04:55 PM	R59627
Acetone	ND	60	500		µg/L	50	5/3/2019 7:04:55 PM	R59627
Bromobenzene	ND	12	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Bromodichloromethane	ND	6.7	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Bromoform	ND	14	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Bromomethane	ND	14	150		µg/L	50	5/3/2019 7:04:55 PM	R59627
2-Butanone	ND	100	500		µg/L	50	5/3/2019 7:04:55 PM	R59627
Carbon disulfide	ND	23	500		µg/L	50	5/3/2019 7:04:55 PM	R59627
Carbon Tetrachloride	ND	7.0	50		µg/L	50	5/3/2019 7:04:55 PM	R59627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 10:19:00 AM
Lab ID: 1905120-003
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	9.7	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Chloroethane	ND	8.9	100		µg/L	50	5/3/2019 7:04:55 PM	R59627
Chloroform	ND	6.1	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Chloromethane	ND	16	150		µg/L	50	5/3/2019 7:04:55 PM	R59627
2-Chlorotoluene	ND	12	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
4-Chlorotoluene	ND	12	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
cis-1,2-DCE	ND	9.5	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
cis-1,3-Dichloropropene	ND	6.9	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2-Dibromo-3-chloropropane	ND	16	100		µg/L	50	5/3/2019 7:04:55 PM	R59627
Dibromochloromethane	ND	12	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Dibromomethane	ND	10	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2-Dichlorobenzene	ND	15	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,3-Dichlorobenzene	ND	12	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,4-Dichlorobenzene	ND	15	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Dichlorodifluoromethane	ND	13	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,1-Dichloroethane	ND	7.0	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,1-Dichloroethene	ND	10	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2-Dichloropropane	ND	10	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,3-Dichloropropane	ND	10	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
2,2-Dichloropropane	ND	12	100		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,1-Dichloropropene	ND	8.1	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Hexachlorobutadiene	ND	15	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
2-Hexanone	ND	77	500		µg/L	50	5/3/2019 7:04:55 PM	R59627
Isopropylbenzene	14	9.6	50	J	µg/L	50	5/3/2019 7:04:55 PM	R59627
4-Isopropyltoluene	ND	11	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
4-Methyl-2-pentanone	ND	36	500		µg/L	50	5/3/2019 7:04:55 PM	R59627
Methylene Chloride	ND	7.7	150		µg/L	50	5/3/2019 7:04:55 PM	R59627
n-Butylbenzene	ND	11	150		µg/L	50	5/3/2019 7:04:55 PM	R59627
n-Propylbenzene	32	11	50	J	µg/L	50	5/3/2019 7:04:55 PM	R59627
sec-Butylbenzene	ND	12	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Styrene	ND	9.6	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
tert-Butylbenzene	ND	10	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,1,1,2-Tetrachloroethane	ND	10	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,1,2,2-Tetrachloroethane	ND	27	100		µg/L	50	5/3/2019 7:04:55 PM	R59627
Tetrachloroethene (PCE)	ND	7.5	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
trans-1,2-DCE	ND	9.0	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
trans-1,3-Dichloropropene	ND	8.3	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2,3-Trichlorobenzene	ND	15	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2,4-Trichlorobenzene	ND	9.8	50		µg/L	50	5/3/2019 7:04:55 PM	R59627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-14
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 10:19:00 AM
Lab ID: 1905120-003
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	8.6	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,1,2-Trichloroethane	ND	11	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Trichloroethene (TCE)	ND	8.3	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Trichlorofluoromethane	ND	9.5	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
1,2,3-Trichloropropane	ND	15	100		µg/L	50	5/3/2019 7:04:55 PM	R59627
Vinyl chloride	ND	9.0	50		µg/L	50	5/3/2019 7:04:55 PM	R59627
Xylenes, Total	ND	23	75		µg/L	50	5/3/2019 7:04:55 PM	R59627
Surr: 1,2-Dichloroethane-d4	92.7	0	70-130		%Rec	50	5/3/2019 7:04:55 PM	R59627
Surr: 4-Bromofluorobenzene	95.1	0	70-130		%Rec	50	5/3/2019 7:04:55 PM	R59627
Surr: Dibromofluoromethane	106	0	70-130		%Rec	50	5/3/2019 7:04:55 PM	R59627
Surr: Toluene-d8	94.6	0	70-130		%Rec	50	5/3/2019 7:04:55 PM	R59627
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	29	1.5	2.5		mg/L	50	5/3/2019 7:04:55 PM	G59627
Surr: BFB	106	0	70-130		%Rec	50	5/3/2019 7:04:55 PM	G59627

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 11:45:00 AM
Lab ID: 1905120-004
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	5/6/2019 10:04:26 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/3/2019 10:24:58 PM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2019 10:24:58 PM	44702
Surr: DNOP	121	0	70-130		%Rec	1	5/3/2019 10:24:58 PM	44702
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0065	0.0025	0.020	J	mg/L	1	5/6/2019 3:13:45 PM	B59669
Barium	0.019	0.00065	0.0020		mg/L	1	5/6/2019 3:13:45 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 3:13:45 PM	B59669
Boron	0.34	0.0045	0.040		mg/L	1	5/6/2019 3:13:45 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 3:13:45 PM	B59669
Calcium	8.8	0.062	1.0		mg/L	1	5/6/2019 3:13:45 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 3:13:45 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 3:13:45 PM	B59669
Copper	0.0017	0.0013	0.0060	J	mg/L	1	5/6/2019 3:13:45 PM	B59669
Iron	ND	0.0087	0.020		mg/L	1	5/6/2019 3:13:45 PM	B59669
Magnesium	1.3	0.050	1.0		mg/L	1	5/6/2019 3:13:45 PM	B59669
Manganese	0.020	0.00029	0.0020		mg/L	1	5/6/2019 3:13:45 PM	B59669
Molybdenum	0.0087	0.0067	0.0080		mg/L	1	5/6/2019 3:13:45 PM	B59669
Nickel	ND	0.0040	0.010		mg/L	1	5/6/2019 3:13:45 PM	B59669
Potassium	1.2	0.16	1.0		mg/L	1	5/6/2019 3:13:45 PM	B59669
Silver	ND	0.00094	0.0050		mg/L	1	5/6/2019 3:13:45 PM	B59669
Sodium	290	2.1	5.0		mg/L	5	5/6/2019 3:15:56 PM	B59669
Zinc	0.12	0.0023	0.010		mg/L	1	5/6/2019 3:13:45 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.0026	0.0025	0.020	J	mg/L	1	5/6/2019 4:51:48 PM	A59669
Barium	0.019	0.00065	0.0020		mg/L	1	5/6/2019 4:51:48 PM	A59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 4:51:48 PM	A59669
Boron	0.34	0.0045	0.040		mg/L	1	5/6/2019 4:51:48 PM	A59669
Cadmium	ND	0.00074	0.0020		mg/L	1	5/6/2019 4:51:48 PM	A59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 4:51:48 PM	A59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 4:51:48 PM	A59669
Copper	ND	0.0041	0.0060		mg/L	1	5/6/2019 4:51:48 PM	A59669
Iron	ND	0.0087	0.020		mg/L	1	5/6/2019 4:51:48 PM	A59669
Manganese	0.019	0.00029	0.0020		mg/L	1	5/6/2019 4:51:48 PM	A59669
Molybdenum	0.0078	0.0067	0.0080	J	mg/L	1	5/6/2019 4:51:48 PM	A59669
Nickel	ND	0.0040	0.010		mg/L	1	5/6/2019 4:51:48 PM	A59669
Silver	ND	0.0014	0.0050		mg/L	1	5/6/2019 4:51:48 PM	A59669

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 11:45:00 AM
Lab ID: 1905120-004
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	5/6/2019 4:51:48 PM	A59669
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 4:54:01 PM	B59666
Arsenic	0.00069	0.00010	0.0010	J	mg/L	1	5/6/2019 4:54:01 PM	B59666
Lead	ND	0.000055	0.00050		mg/L	1	5/6/2019 4:54:01 PM	B59666
Selenium	ND	0.00017	0.0010		mg/L	1	5/6/2019 4:54:01 PM	B59666
Thallium	ND	0.000048	0.00050		mg/L	1	5/6/2019 4:54:01 PM	B59666
Uranium	0.016	0.000075	0.00050		mg/L	1	5/8/2019 1:52:08 PM	A59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 3:34:25 PM	A59666
Arsenic	0.00070	0.00031	0.0010	J	mg/L	1	5/6/2019 3:34:25 PM	A59666
Lead	ND	0.000055	0.00050		mg/L	1	5/6/2019 3:34:25 PM	A59666
Selenium	ND	0.00048	0.0010		mg/L	1	5/6/2019 3:34:25 PM	A59666
Thallium	ND	0.000052	0.00050		mg/L	1	5/6/2019 3:34:25 PM	A59666
Uranium	0.016	0.00042	0.0025		mg/L	5	5/8/2019 5:30:12 PM	C59725
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/7/2019 11:35:30 AM	44742
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.36	0.17	1.0	J	µg/L	1	5/3/2019 8:30:31 PM	R59627
Toluene	ND	0.35	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Methyl tert-butyl ether (MTBE)	82	0.46	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2-Dichloroethane (EDC)	0.62	0.19	1.0	J	µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Naphthalene	ND	0.28	2.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Acetone	ND	1.2	10		µg/L	1	5/3/2019 8:30:31 PM	R59627
Bromobenzene	ND	0.24	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Bromoform	ND	0.29	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Bromomethane	ND	0.27	3.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
2-Butanone	ND	2.1	10		µg/L	1	5/3/2019 8:30:31 PM	R59627
Carbon disulfide	ND	0.45	10		µg/L	1	5/3/2019 8:30:31 PM	R59627
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 11:45:00 AM
Lab ID: 1905120-004
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Chloroethane	ND	0.18	2.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Chloroform	ND	0.12	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Chloromethane	ND	0.32	3.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Dibromomethane	ND	0.21	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
2-Hexanone	ND	1.5	10		µg/L	1	5/3/2019 8:30:31 PM	R59627
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/3/2019 8:30:31 PM	R59627
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Styrene	ND	0.19	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 11:45:00 AM
Lab ID: 1905120-004
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/3/2019 8:30:31 PM	R59627
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/3/2019 8:30:31 PM	R59627
Surr: 1,2-Dichloroethane-d4	91.5	0	70-130		%Rec	1	5/3/2019 8:30:31 PM	R59627
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	5/3/2019 8:30:31 PM	R59627
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	5/3/2019 8:30:31 PM	R59627
Surr: Toluene-d8	92.2	0	70-130		%Rec	1	5/3/2019 8:30:31 PM	R59627
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.048	0.031	0.050	J	mg/L	1	5/3/2019 8:30:31 PM	G59627
Surr: BFB	105	0	70-130		%Rec	1	5/3/2019 8:30:31 PM	G59627

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:50:00 PM
Lab ID: 1905120-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0096		µg/L	1	5/6/2019 10:19:44 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/3/2019 10:47:17 PM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2019 10:47:17 PM	44702
Surr: DNOP	122	0	70-130		%Rec	1	5/3/2019 10:47:17 PM	44702
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/6/2019 3:18:11 PM	B59669
Barium	0.072	0.00065	0.0020		mg/L	1	5/6/2019 3:18:11 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 3:18:11 PM	B59669
Boron	0.53	0.0045	0.040		mg/L	1	5/6/2019 3:18:11 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 3:18:11 PM	B59669
Calcium	58	0.062	1.0		mg/L	1	5/6/2019 3:18:11 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 3:18:11 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 3:18:11 PM	B59669
Copper	ND	0.0013	0.0060		mg/L	1	5/6/2019 3:18:11 PM	B59669
Iron	0.27	0.0087	0.020		mg/L	1	5/6/2019 3:18:11 PM	B59669
Magnesium	13	0.050	1.0		mg/L	1	5/6/2019 3:18:11 PM	B59669
Manganese	0.33	0.00029	0.0020	*	mg/L	1	5/6/2019 3:18:11 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 3:18:11 PM	B59669
Nickel	0.020	0.0040	0.010		mg/L	1	5/6/2019 3:18:11 PM	B59669
Potassium	0.44	0.16	1.0	J	mg/L	1	5/6/2019 3:18:11 PM	B59669
Silver	ND	0.00094	0.0050		mg/L	1	5/6/2019 3:18:11 PM	B59669
Sodium	390	2.1	5.0		mg/L	5	5/6/2019 3:20:25 PM	B59669
Zinc	0.064	0.0023	0.010		mg/L	1	5/6/2019 3:18:11 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.17	0.0025	0.020		mg/L	1	5/8/2019 6:07:46 PM	44734
Barium	0.077	0.00065	0.0020		mg/L	1	5/8/2019 6:07:46 PM	44734
Beryllium	ND	0.00028	0.0020		mg/L	1	5/8/2019 6:07:46 PM	44734
Boron	0.57	0.0045	0.040		mg/L	1	5/8/2019 6:07:46 PM	44734
Cadmium	ND	0.00074	0.0020		mg/L	1	5/8/2019 6:07:46 PM	44734
Chromium	ND	0.0015	0.0060		mg/L	1	5/8/2019 6:07:46 PM	44734
Cobalt	ND	0.0031	0.0060		mg/L	1	5/8/2019 6:07:46 PM	44734
Copper	ND	0.0041	0.0060		mg/L	1	5/8/2019 6:07:46 PM	44734
Iron	0.36	0.0087	0.020	*	mg/L	1	5/8/2019 6:07:46 PM	44734
Manganese	0.34	0.00029	0.0020	*	mg/L	1	5/8/2019 6:07:46 PM	44734
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/8/2019 6:07:46 PM	44734
Nickel	0.021	0.0040	0.010		mg/L	1	5/8/2019 6:07:46 PM	44734
Silver	ND	0.0014	0.0050		mg/L	1	5/8/2019 6:07:46 PM	44734

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:50:00 PM
Lab ID: 1905120-005
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	5/8/2019 6:07:46 PM	44734
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 5:02:01 PM	B59666
Arsenic	0.00061	0.00010	0.0010	J	mg/L	1	5/6/2019 5:02:01 PM	B59666
Lead	ND	0.000055	0.00050		mg/L	1	5/6/2019 5:02:01 PM	B59666
Selenium	ND	0.00017	0.0010		mg/L	1	5/6/2019 5:02:01 PM	B59666
Thallium	ND	0.000048	0.00050		mg/L	1	5/6/2019 5:02:01 PM	B59666
Uranium	0.051	0.00037	0.0025	*	mg/L	5	5/8/2019 1:54:50 PM	A59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/7/2019 1:20:37 PM	44734
Arsenic	0.00071	0.00031	0.0010	J	mg/L	1	5/7/2019 1:20:37 PM	44734
Lead	0.00013	0.000055	0.00050	J	mg/L	1	5/7/2019 1:20:37 PM	44734
Selenium	ND	0.00048	0.0010		mg/L	1	5/7/2019 1:20:37 PM	44734
Thallium	0.000057	0.000052	0.00050	J	mg/L	1	5/7/2019 1:20:37 PM	44734
Uranium	0.049	0.00042	0.0025	*	mg/L	5	5/7/2019 2:05:22 PM	44734
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/7/2019 11:37:33 AM	44742
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.83	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Toluene	ND	1.8	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Ethylbenzene	ND	0.66	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Methyl tert-butyl ether (MTBE)	3700	23	50		µg/L	50	5/3/2019 8:59:09 PM	R59627
1,2,4-Trimethylbenzene	ND	1.1	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Naphthalene	ND	1.4	10		µg/L	5	5/7/2019 1:53:52 PM	R59712
1-Methylnaphthalene	ND	1.6	20		µg/L	5	5/7/2019 1:53:52 PM	R59712
2-Methylnaphthalene	ND	1.7	20		µg/L	5	5/7/2019 1:53:52 PM	R59712
Acetone	ND	6.0	50		µg/L	5	5/7/2019 1:53:52 PM	R59712
Bromobenzene	ND	1.2	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Bromoform	ND	1.4	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Bromomethane	ND	1.4	15		µg/L	5	5/7/2019 1:53:52 PM	R59712
2-Butanone	ND	10	50		µg/L	5	5/7/2019 1:53:52 PM	R59712
Carbon disulfide	ND	2.3	50		µg/L	5	5/7/2019 1:53:52 PM	R59712
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:50:00 PM
Lab ID: 1905120-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Chloroethane	ND	0.89	10		µg/L	5	5/7/2019 1:53:52 PM	R59712
Chloroform	ND	0.61	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Chloromethane	ND	1.6	15		µg/L	5	5/7/2019 1:53:52 PM	R59712
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/7/2019 1:53:52 PM	R59712
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Dibromomethane	ND	1.0	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
2-Hexanone	ND	7.7	50		µg/L	5	5/7/2019 1:53:52 PM	R59712
Isopropylbenzene	ND	0.96	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/7/2019 1:53:52 PM	R59712
Methylene Chloride	ND	0.77	15		µg/L	5	5/7/2019 1:53:52 PM	R59712
n-Butylbenzene	ND	1.1	15		µg/L	5	5/7/2019 1:53:52 PM	R59712
n-Propylbenzene	ND	1.1	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Styrene	ND	0.96	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/7/2019 1:53:52 PM	R59712
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:50:00 PM
Lab ID: 1905120-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/7/2019 1:53:52 PM	R59712
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/7/2019 1:53:52 PM	R59712
Xylenes, Total	ND	2.3	7.5		µg/L	5	5/7/2019 1:53:52 PM	R59712
Surr: 1,2-Dichloroethane-d4	96.6	0	70-130		%Rec	5	5/7/2019 1:53:52 PM	R59712
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	5	5/7/2019 1:53:52 PM	R59712
Surr: Dibromofluoromethane	110	0	70-130		%Rec	5	5/7/2019 1:53:52 PM	R59712
Surr: Toluene-d8	92.3	0	70-130		%Rec	5	5/7/2019 1:53:52 PM	R59712
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	2.4	0.15	0.25		mg/L	5	5/7/2019 1:53:52 PM	G59712
Surr: BFB	107	0	70-130		%Rec	5	5/7/2019 1:53:52 PM	G59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:57:00 PM
Lab ID: 1905120-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/6/2019 10:35:02 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/3/2019 11:09:27 PM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2019 11:09:27 PM	44702
Surr: DNOP	116	0	70-130		%Rec	1	5/3/2019 11:09:27 PM	44702
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/6/2019 3:22:47 PM	B59669
Barium	0.071	0.00065	0.0020		mg/L	1	5/6/2019 3:22:47 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 3:22:47 PM	B59669
Boron	0.52	0.0045	0.040		mg/L	1	5/6/2019 3:22:47 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 3:22:47 PM	B59669
Calcium	58	0.062	1.0		mg/L	1	5/6/2019 3:22:47 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 3:22:47 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 3:22:47 PM	B59669
Copper	0.0023	0.0013	0.0060	J	mg/L	1	5/6/2019 3:22:47 PM	B59669
Iron	0.22	0.0087	0.020		mg/L	1	5/6/2019 3:22:47 PM	B59669
Magnesium	13	0.050	1.0		mg/L	1	5/6/2019 3:22:47 PM	B59669
Manganese	0.33	0.00029	0.0020	*	mg/L	1	5/6/2019 3:22:47 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 3:22:47 PM	B59669
Nickel	0.021	0.0040	0.010		mg/L	1	5/6/2019 3:22:47 PM	B59669
Potassium	0.44	0.16	1.0	J	mg/L	1	5/6/2019 3:22:47 PM	B59669
Silver	0.0011	0.00094	0.0050	J	mg/L	1	5/6/2019 3:22:47 PM	B59669
Sodium	400	2.1	5.0		mg/L	5	5/6/2019 3:24:58 PM	B59669
Zinc	0.072	0.0023	0.010		mg/L	1	5/6/2019 3:22:47 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.16	0.0025	0.020		mg/L	1	5/8/2019 6:12:23 PM	44734
Barium	0.077	0.00065	0.0020		mg/L	1	5/8/2019 6:12:23 PM	44734
Beryllium	ND	0.00028	0.0020		mg/L	1	5/8/2019 6:12:23 PM	44734
Boron	0.58	0.0045	0.040		mg/L	1	5/8/2019 6:12:23 PM	44734
Cadmium	ND	0.00074	0.0020		mg/L	1	5/8/2019 6:12:23 PM	44734
Chromium	ND	0.0015	0.0060		mg/L	1	5/8/2019 6:12:23 PM	44734
Cobalt	ND	0.0031	0.0060		mg/L	1	5/8/2019 6:12:23 PM	44734
Copper	ND	0.0041	0.0060		mg/L	1	5/8/2019 6:12:23 PM	44734
Iron	0.35	0.0087	0.020	*	mg/L	1	5/8/2019 6:12:23 PM	44734
Manganese	0.35	0.00029	0.0020	*	mg/L	1	5/8/2019 6:12:23 PM	44734
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/8/2019 6:12:23 PM	44734
Nickel	0.021	0.0040	0.010		mg/L	1	5/8/2019 6:12:23 PM	44734
Silver	ND	0.0014	0.0050		mg/L	1	5/8/2019 6:12:23 PM	44734

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:57:00 PM
Lab ID: 1905120-006
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	5/8/2019 6:12:23 PM	44734
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 5:04:40 PM	B59666
Arsenic	0.00061	0.00010	0.0010	J	mg/L	1	5/6/2019 5:04:40 PM	B59666
Lead	ND	0.000055	0.00050		mg/L	1	5/6/2019 5:04:40 PM	B59666
Selenium	ND	0.00017	0.0010		mg/L	1	5/6/2019 5:04:40 PM	B59666
Thallium	ND	0.000048	0.00050		mg/L	1	5/6/2019 5:04:40 PM	B59666
Uranium	0.051	0.00037	0.0025	*	mg/L	5	5/8/2019 1:57:32 PM	A59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/7/2019 1:22:48 PM	44734
Arsenic	0.00074	0.00031	0.0010	J	mg/L	1	5/7/2019 1:22:48 PM	44734
Lead	0.000074	0.000055	0.00050	J	mg/L	1	5/7/2019 1:22:48 PM	44734
Selenium	ND	0.00048	0.0010		mg/L	1	5/7/2019 1:22:48 PM	44734
Thallium	ND	0.000052	0.00050		mg/L	1	5/7/2019 1:22:48 PM	44734
Uranium	0.049	0.00042	0.0025	*	mg/L	5	5/7/2019 2:11:58 PM	44734
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/7/2019 11:39:38 AM	44742
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.83	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Toluene	ND	1.8	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Ethylbenzene	ND	0.66	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Methyl tert-butyl ether (MTBE)	3900	23	50		µg/L	50	5/7/2019 2:22:37 PM	R59712
1,2,4-Trimethylbenzene	ND	1.1	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Naphthalene	ND	1.4	10		µg/L	5	5/7/2019 2:51:16 PM	R59712
1-Methylnaphthalene	ND	1.6	20		µg/L	5	5/7/2019 2:51:16 PM	R59712
2-Methylnaphthalene	ND	1.7	20		µg/L	5	5/7/2019 2:51:16 PM	R59712
Acetone	ND	6.0	50		µg/L	5	5/7/2019 2:51:16 PM	R59712
Bromobenzene	ND	1.2	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Bromoform	ND	1.4	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Bromomethane	ND	1.4	15		µg/L	5	5/7/2019 2:51:16 PM	R59712
2-Butanone	ND	10	50		µg/L	5	5/7/2019 2:51:16 PM	R59712
Carbon disulfide	ND	2.3	50		µg/L	5	5/7/2019 2:51:16 PM	R59712
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:57:00 PM
Lab ID: 1905120-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Chloroethane	ND	0.89	10		µg/L	5	5/7/2019 2:51:16 PM	R59712
Chloroform	ND	0.61	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Chloromethane	ND	1.6	15		µg/L	5	5/7/2019 2:51:16 PM	R59712
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/7/2019 2:51:16 PM	R59712
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Dibromomethane	ND	1.0	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
2-Hexanone	ND	7.7	50		µg/L	5	5/7/2019 2:51:16 PM	R59712
Isopropylbenzene	ND	0.96	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/7/2019 2:51:16 PM	R59712
Methylene Chloride	ND	0.77	15		µg/L	5	5/7/2019 2:51:16 PM	R59712
n-Butylbenzene	ND	1.1	15		µg/L	5	5/7/2019 2:51:16 PM	R59712
n-Propylbenzene	ND	1.1	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Styrene	ND	0.96	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/7/2019 2:51:16 PM	R59712
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 1:57:00 PM
Lab ID: 1905120-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/7/2019 2:51:16 PM	R59712
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/7/2019 2:51:16 PM	R59712
Xylenes, Total	ND	2.3	7.5		µg/L	5	5/7/2019 2:51:16 PM	R59712
Surr: 1,2-Dichloroethane-d4	97.1	0	70-130		%Rec	5	5/7/2019 2:51:16 PM	R59712
Surr: 4-Bromofluorobenzene	98.6	0	70-130		%Rec	5	5/7/2019 2:51:16 PM	R59712
Surr: Dibromofluoromethane	111	0	70-130		%Rec	5	5/7/2019 2:51:16 PM	R59712
Surr: Toluene-d8	91.5	0	70-130		%Rec	5	5/7/2019 2:51:16 PM	R59712
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	2.4	0.15	0.25		mg/L	5	5/7/2019 2:51:16 PM	G59712
Surr: BFB	108	0	70-130		%Rec	5	5/7/2019 2:51:16 PM	G59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 2:50:00 PM
Lab ID: 1905120-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0096		µg/L	1	5/6/2019 10:50:14 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/3/2019 11:31:55 PM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2019 11:31:55 PM	44702
Surr: DNOP	118	0	70-130		%Rec	1	5/3/2019 11:31:55 PM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.46	0.25	0.50	J	mg/L	5	5/2/2019 11:18:19 PM	R59616
Chloride	40	0.31	2.5		mg/L	5	5/2/2019 11:18:19 PM	R59616
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/2/2019 11:18:19 PM	R59616
Bromide	ND	0.089	0.50		mg/L	5	5/2/2019 11:18:19 PM	R59616
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/2/2019 11:18:19 PM	R59616
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/2/2019 11:18:19 PM	R59616
Sulfate	170	0.27	2.5		mg/L	5	5/2/2019 11:18:19 PM	R59616
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.024	0.0025	0.020		mg/L	1	5/6/2019 3:33:53 PM	B59669
Barium	0.051	0.00065	0.0020		mg/L	1	5/6/2019 3:33:53 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 3:33:53 PM	B59669
Boron	0.36	0.0045	0.040		mg/L	1	5/6/2019 3:33:53 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 3:33:53 PM	B59669
Calcium	27	0.062	1.0		mg/L	1	5/6/2019 3:33:53 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 3:33:53 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 3:33:53 PM	B59669
Copper	ND	0.0013	0.0060		mg/L	1	5/6/2019 3:33:53 PM	B59669
Iron	0.017	0.0087	0.020	J	mg/L	1	5/6/2019 3:33:53 PM	B59669
Magnesium	4.5	0.050	1.0		mg/L	1	5/6/2019 3:33:53 PM	B59669
Manganese	0.11	0.00029	0.0020	*	mg/L	1	5/6/2019 3:33:53 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 3:33:53 PM	B59669
Nickel	ND	0.0040	0.010		mg/L	1	5/6/2019 3:33:53 PM	B59669
Potassium	0.52	0.16	1.0	J	mg/L	1	5/6/2019 3:33:53 PM	B59669
Silver	ND	0.00094	0.0050		mg/L	1	5/6/2019 3:33:53 PM	B59669
Sodium	250	2.1	5.0		mg/L	5	5/6/2019 3:36:04 PM	B59669
Zinc	0.056	0.0023	0.010		mg/L	1	5/6/2019 3:33:53 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.9	0.012	0.10	*	mg/L	5	5/6/2019 5:05:16 PM	A59669
Barium	0.066	0.00065	0.0020		mg/L	1	5/6/2019 5:03:02 PM	A59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 5:03:02 PM	A59669
Boron	0.36	0.0045	0.040		mg/L	1	5/6/2019 5:03:02 PM	A59669

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 2:50:00 PM
Lab ID: 1905120-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/6/2019 5:03:02 PM	A59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 5:03:02 PM	A59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 5:03:02 PM	A59669
Copper	ND	0.0041	0.0060		mg/L	1	5/6/2019 5:03:02 PM	A59669
Iron	0.64	0.0087	0.020	*	mg/L	1	5/6/2019 5:03:02 PM	A59669
Manganese	0.12	0.00029	0.0020	*	mg/L	1	5/6/2019 5:03:02 PM	A59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 5:03:02 PM	A59669
Nickel	ND	0.0040	0.010		mg/L	1	5/6/2019 5:03:02 PM	A59669
Silver	ND	0.0014	0.0050		mg/L	1	5/6/2019 5:03:02 PM	A59669
Zinc	ND	0.0058	0.010		mg/L	1	5/6/2019 5:03:02 PM	A59669
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 5:07:19 PM	B59666
Arsenic	0.0018	0.00010	0.0010		mg/L	1	5/6/2019 5:07:19 PM	B59666
Lead	ND	0.000055	0.00050		mg/L	1	5/6/2019 5:07:19 PM	B59666
Selenium	ND	0.00017	0.0010		mg/L	1	5/6/2019 5:07:19 PM	B59666
Thallium	ND	0.000048	0.00050		mg/L	1	5/6/2019 5:07:19 PM	B59666
Uranium	0.012	0.000075	0.00050		mg/L	1	5/8/2019 2:00:15 PM	A59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 3:37:04 PM	A59666
Arsenic	0.0019	0.00031	0.0010		mg/L	1	5/6/2019 3:37:04 PM	A59666
Lead	0.00055	0.000055	0.00050		mg/L	1	5/6/2019 3:37:04 PM	A59666
Selenium	ND	0.00048	0.0010		mg/L	1	5/6/2019 3:37:04 PM	A59666
Thallium	ND	0.000052	0.00050		mg/L	1	5/6/2019 3:37:04 PM	A59666
Uranium	0.012	0.000085	0.00050		mg/L	1	5/8/2019 4:25:05 PM	C59725
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/7/2019 11:41:42 AM	44742
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.19	0.17	1.0	J	µg/L	1	5/7/2019 3:19:53 PM	R59712
Toluene	ND	0.35	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Methyl tert-butyl ether (MTBE)	18	0.46	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2-Dichloroethane (EDC)	0.34	0.19	1.0	J	µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Naphthalene	ND	0.28	2.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/7/2019 3:19:53 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 2:50:00 PM
Lab ID: 1905120-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Acetone	ND	1.2	10		µg/L	1	5/7/2019 3:19:53 PM	R59712
Bromobenzene	ND	0.24	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Bromoform	ND	0.29	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Bromomethane	ND	0.27	3.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
2-Butanone	ND	2.1	10		µg/L	1	5/7/2019 3:19:53 PM	R59712
Carbon disulfide	ND	0.45	10		µg/L	1	5/7/2019 3:19:53 PM	R59712
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Chloroethane	ND	0.18	2.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Chloroform	ND	0.12	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Chloromethane	ND	0.32	3.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Dibromomethane	ND	0.21	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
2-Hexanone	ND	1.5	10		µg/L	1	5/7/2019 3:19:53 PM	R59712
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/7/2019 3:19:53 PM	R59712
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 2:50:00 PM
Lab ID: 1905120-007 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/7/2019 3:19:53 PM	R59712
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/7/2019 3:19:53 PM	R59712
Surr: 1,2-Dichloroethane-d4	96.6	0	70-130		%Rec	1	5/7/2019 3:19:53 PM	R59712
Surr: 4-Bromofluorobenzene	98.3	0	70-130		%Rec	1	5/7/2019 3:19:53 PM	R59712
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/7/2019 3:19:53 PM	R59712
Surr: Toluene-d8	92.3	0	70-130		%Rec	1	5/7/2019 3:19:53 PM	R59712
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/7/2019 3:19:53 PM	G59712
Surr: BFB	108	0	70-130		%Rec	1	5/7/2019 3:19:53 PM	G59712

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 3:35:00 PM
Lab ID: 1905120-008
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/6/2019 11:05:29 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/3/2019 11:53:59 PM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2019 11:53:59 PM	44702
Surr: DNOP	118	0	70-130		%Rec	1	5/3/2019 11:53:59 PM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.52	0.25	0.50		mg/L	5	5/2/2019 11:43:07 PM	R59616
Chloride	26	0.31	2.5		mg/L	5	5/2/2019 11:43:07 PM	R59616
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/2/2019 11:43:07 PM	R59616
Bromide	ND	0.089	0.50		mg/L	5	5/2/2019 11:43:07 PM	R59616
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/2/2019 11:43:07 PM	R59616
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/2/2019 11:43:07 PM	R59616
Sulfate	140	0.27	2.5		mg/L	5	5/2/2019 11:43:07 PM	R59616
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.022	0.0025	0.020		mg/L	1	5/6/2019 3:38:20 PM	B59669
Barium	0.029	0.00065	0.0020		mg/L	1	5/6/2019 3:38:20 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 3:38:20 PM	B59669
Boron	0.36	0.0045	0.040		mg/L	1	5/6/2019 3:38:20 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 3:38:20 PM	B59669
Calcium	4.7	0.062	1.0		mg/L	1	5/6/2019 3:38:20 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 3:38:20 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 3:38:20 PM	B59669
Copper	0.0016	0.0013	0.0060	J	mg/L	1	5/6/2019 3:38:20 PM	B59669
Iron	0.060	0.0087	0.020		mg/L	1	5/6/2019 3:38:20 PM	B59669
Magnesium	0.62	0.050	1.0	J	mg/L	1	5/6/2019 3:38:20 PM	B59669
Manganese	0.026	0.00029	0.0020		mg/L	1	5/6/2019 3:38:20 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 3:38:20 PM	B59669
Nickel	ND	0.0040	0.010		mg/L	1	5/6/2019 3:38:20 PM	B59669
Potassium	1.3	0.16	1.0		mg/L	1	5/6/2019 3:38:20 PM	B59669
Silver	ND	0.00094	0.0050		mg/L	1	5/6/2019 3:38:20 PM	B59669
Sodium	240	2.1	5.0		mg/L	5	5/6/2019 3:40:24 PM	B59669
Zinc	0.052	0.0023	0.010		mg/L	1	5/6/2019 3:38:20 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.44	0.0025	0.020	*	mg/L	1	5/6/2019 5:07:32 PM	A59669
Barium	0.030	0.00065	0.0020		mg/L	1	5/6/2019 5:07:32 PM	A59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 5:07:32 PM	A59669
Boron	0.36	0.0045	0.040		mg/L	1	5/6/2019 5:07:32 PM	A59669

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 3:35:00 PM
Lab ID: 1905120-008
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/6/2019 5:07:32 PM	A59669
Chromium	0.0054	0.0015	0.0060	J	mg/L	1	5/6/2019 5:07:32 PM	A59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 5:07:32 PM	A59669
Copper	ND	0.0041	0.0060		mg/L	1	5/6/2019 5:07:32 PM	A59669
Iron	0.29	0.0087	0.020		mg/L	1	5/6/2019 5:07:32 PM	A59669
Manganese	0.028	0.00029	0.0020		mg/L	1	5/6/2019 5:07:32 PM	A59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 5:07:32 PM	A59669
Nickel	ND	0.0040	0.010		mg/L	1	5/6/2019 5:07:32 PM	A59669
Silver	ND	0.0014	0.0050		mg/L	1	5/6/2019 5:07:32 PM	A59669
Zinc	ND	0.0058	0.010		mg/L	1	5/6/2019 5:07:32 PM	A59669
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 5:09:58 PM	B59666
Arsenic	0.00062	0.00010	0.0010	J	mg/L	1	5/6/2019 5:09:58 PM	B59666
Lead	ND	0.000055	0.00050		mg/L	1	5/6/2019 5:09:58 PM	B59666
Selenium	ND	0.00017	0.0010		mg/L	1	5/6/2019 5:09:58 PM	B59666
Thallium	ND	0.000048	0.00050		mg/L	1	5/6/2019 5:09:58 PM	B59666
Uranium	0.011	0.000075	0.00050		mg/L	1	5/8/2019 2:08:24 PM	A59725
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/6/2019 3:39:43 PM	A59666
Arsenic	0.00057	0.00031	0.0010	J	mg/L	1	5/6/2019 3:39:43 PM	A59666
Lead	0.00011	0.000055	0.00050	J	mg/L	1	5/6/2019 3:39:43 PM	A59666
Selenium	ND	0.00048	0.0010		mg/L	1	5/6/2019 3:39:43 PM	A59666
Thallium	ND	0.000052	0.00050		mg/L	1	5/6/2019 3:39:43 PM	A59666
Uranium	0.0099	0.000085	0.00050		mg/L	1	5/8/2019 4:27:47 PM	C59725
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/7/2019 11:48:01 AM	44742
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.19	0.17	1.0	J	µg/L	1	5/7/2019 3:48:40 PM	R59712
Toluene	ND	0.35	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Methyl tert-butyl ether (MTBE)	1.9	0.46	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2-Dichloroethane (EDC)	0.32	0.19	1.0	J	µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Naphthalene	ND	0.28	2.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/7/2019 3:48:40 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 3:35:00 PM
Lab ID: 1905120-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Acetone	ND	1.2	10		µg/L	1	5/7/2019 3:48:40 PM	R59712
Bromobenzene	ND	0.24	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Bromoform	ND	0.29	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Bromomethane	ND	0.27	3.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
2-Butanone	ND	2.1	10		µg/L	1	5/7/2019 3:48:40 PM	R59712
Carbon disulfide	ND	0.45	10		µg/L	1	5/7/2019 3:48:40 PM	R59712
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Chloroethane	ND	0.18	2.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Chloroform	ND	0.12	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Chloromethane	ND	0.32	3.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Dibromomethane	ND	0.21	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
2-Hexanone	ND	1.5	10		µg/L	1	5/7/2019 3:48:40 PM	R59712
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/7/2019 3:48:40 PM	R59712
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/1/2019 3:35:00 PM
Lab ID: 1905120-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/7/2019 3:48:40 PM	R59712
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/7/2019 3:48:40 PM	R59712
Surr: 1,2-Dichloroethane-d4	97.4	0	70-130		%Rec	1	5/7/2019 3:48:40 PM	R59712
Surr: 4-Bromofluorobenzene	95.9	0	70-130		%Rec	1	5/7/2019 3:48:40 PM	R59712
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/7/2019 3:48:40 PM	R59712
Surr: Toluene-d8	94.4	0	70-130		%Rec	1	5/7/2019 3:48:40 PM	R59712
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/7/2019 3:48:40 PM	G59712
Surr: BFB	109	0	70-130		%Rec	1	5/7/2019 3:48:40 PM	G59712

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	111	50	150			J
Barium	0.0019	0.0020	0.002000	0	97.2	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	106	50	150			
Boron	0.039	0.040	0.04000	0	98.5	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	106	50	150			
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Cobalt	0.0067	0.0060	0.006000	0	112	50	150			
Copper	0.0059	0.0060	0.006000	0	98.7	50	150			J
Iron	0.019	0.020	0.02000	0	95.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0086	0.0080	0.008000	0	108	50	150			
Nickel	0.0053	0.010	0.005000	0	105	50	150			J
Silver	0.0047	0.0050	0.005000	0	94.3	50	150			J
Zinc	0.0049	0.010	0.005000	0	97.3	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011819** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011819** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.7	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Cobalt	0.49	0.0060	0.5000	0	97.7	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.50	0.020	0.5000	0	99.1	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Molybdenum	0.50	0.0080	0.5000	0	99.9	85	115			
Nickel	0.49	0.010	0.5000	0	97.7	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	99.5	85	115			

Sample ID: **MB-44734**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44734**	RunNo: **59705**
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2013006** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0032	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-44734**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44734**	RunNo: **59705**
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2013008** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **LLLCS-44734** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **44734** RunNo: **59705**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013008** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	132	50	150			J
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Beryllium	0.0020	0.0020	0.002000	0	102	50	150			
Boron	0.041	0.040	0.04000	0	102	50	150			
Cadmium	0.0016	0.0020	0.002000	0	78.5	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.1	50	150			J
Cobalt	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0069	0.0060	0.006000	0	115	50	150			
Iron	0.018	0.020	0.02000	0	92.2	50	150			J
Manganese	0.0021	0.0020	0.002000	0	107	50	150			
Molybdenum	0.0079	0.0080	0.008000	0	98.9	50	150			J
Nickel	0.0049	0.010	0.005000	0	97.1	50	150			J
Silver	0.0055	0.0050	0.005000	0	109	50	150			

Sample ID: **LCS-44734** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **44734** RunNo: **59705**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013010** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	111	85	115			
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Beryllium	0.51	0.0020	0.5000	0	102	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.49	0.0060	0.5000	0	98.9	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.0	85	115			
Molybdenum	0.50	0.0080	0.5000	0	99.7	85	115			
Nickel	0.49	0.010	0.5000	0	97.2	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	99.9	85	115			

Sample ID: **LLLCS-44734** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **44734** RunNo: **59705**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2013025** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0081	0.010	0.005000	0	162	50	150			JS

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-44734**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44734**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014375** Units: **mg/L**

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

Sample ID: **LLLCS-44734**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44734**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0067	0.010	0.005000	0	134	50	150			J

Sample ID: **LCS-44734**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **44734**	RunNo: **59738**
Prep Date: **5/6/2019**	Analysis Date: **5/8/2019**	SeqNo: **2014379** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011820** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	106	50	150			J
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	99.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Cobalt	0.0068	0.0060	0.006000	0	114	50	150			
Copper	0.0064	0.0060	0.006000	0	106	50	150			
Iron	0.023	0.020	0.02000	0	115	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.010	0.0080	0.008000	0	127	50	150			
Nickel	0.0056	0.010	0.005000	0	111	50	150			J
Potassium	0.52	1.0	0.5000	0	104	50	150			J

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B59669** RunNo: **59669**
Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J
Sodium	0.52	1.0	0.5000	0	105	50	150			J
Zinc	0.0050	0.010	0.005000	0	100	50	150			J

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B59669** RunNo: **59669**
Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011822** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Beryllium	0.50	0.0020	0.5000	0	101	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.4	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	99.7	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.6	85	115			
Molybdenum	0.50	0.0080	0.5000	0	100	85	115			
Nickel	0.49	0.010	0.5000	0	98.0	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **A59666** RunNo: **59666**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011682** Units: **mg/L**

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

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **A59666** RunNo: **59666**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	92.5	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.9	85	115			
Lead	0.012	0.00050	0.01250	0	98.0	85	115			
Selenium	0.025	0.0010	0.02500	0	99.0	85	115			
Thallium	0.012	0.00050	0.01250	0	97.4	85	115			

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **A59666** RunNo: **59666**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	105	50	150			
Arsenic	0.0011	0.0010	0.001000	0	105	50	150			
Lead	0.00052	0.00050	0.0005000	0	105	50	150			
Selenium	0.00081	0.0010	0.001000	0	81.5	50	150			J
Thallium	0.00054	0.00050	0.0005000	0	107	50	150			

Sample ID: **MB-44734** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **44734** RunNo: **59690**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2012545** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **MSLLLCS-44734** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **44734** RunNo: **59690**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2012547** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00096	0.0010	0.001000	0	96.2	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	98.8	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.4	50	150			J
Selenium	0.0011	0.0010	0.001000	0	106	50	150			
Thallium	0.00044	0.00050	0.0005000	0	87.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.4	50	150			J

Sample ID: **MSLCS-44734** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **44734** RunNo: **59690**

Prep Date: **5/6/2019** Analysis Date: **5/7/2019** SeqNo: **2012549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	104	85	115			
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.024	0.0010	0.02500	0	96.7	85	115			
Thallium	0.013	0.00050	0.01250	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **C59725** RunNo: **59725**

Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014100** Units: **mg/L**

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

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **C59725** RunNo: **59725**

Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00050	0.00050	0.0005000	0	99.2	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **C59725** RunNo: **59725**

Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014102** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	99.8	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **1905120-004GMS**	SampType: **MS**	TestCode: **EPA 200.8: Metals**
Client ID: **OW-13**	Batch ID: **C59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014137** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.078	0.0025	0.06250	0.01563	100	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **PBW** Batch ID: **B59666** RunNo: **59666**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011713** Units: **mg/L**

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

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **B59666** RunNo: **59666**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011714** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.2	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	99.3	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.0012	0.0010	0.001000	0	117	50	150			
Thallium	0.00048	0.00050	0.0005000	0	95.7	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **LCSW** Batch ID: **B59666** RunNo: **59666**

Prep Date: Analysis Date: **5/6/2019** SeqNo: **2011715** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.022	0.0010	0.02500	0	89.5	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.2	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.3	85	115			
Thallium	0.012	0.00050	0.01250	0	98.7	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **PBW** Batch ID: **A59725** RunNo: **59725**

Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014059** Units: **mg/L**

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

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **A59725** RunNo: **59725**

Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014060** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00050	0.00050	0.0005000	0	99.5	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A59725**	RunNo: **59725**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	97.8	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-44742**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44742**	RunNo: **59685**
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2012382** Units: **mg/L**

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

Sample ID: **LCS-44742**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44742**	RunNo: **59685**
Prep Date: **5/6/2019**	Analysis Date: **5/7/2019**	SeqNo: **2012383** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59616** RunNo: **59616**
Prep Date: Analysis Date: **5/2/2019** SeqNo: **2009811** Units: **mg/L**

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

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59616** RunNo: **59616**
Prep Date: Analysis Date: **5/2/2019** SeqNo: **2009812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	90	110			
Chloride	4.8	0.50	5.000	0	95.4	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.3	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	90	110			
Sulfate	9.8	0.50	10.00	0	97.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-44732**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44732**	RunNo: **59664**
Prep Date: **5/6/2019**	Analysis Date: **5/6/2019**	SeqNo: **2011524** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-44732**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44732**	RunNo: **59664**
Prep Date: **5/6/2019**	Analysis Date: **5/6/2019**	SeqNo: **2011526** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.12	0.010	0.1000	0	119	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **LCS-44702**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**							
Client ID: **LCSW**	Batch ID: **44702**	RunNo: **59607**							
Prep Date: **5/3/2019**	Analysis Date: **5/3/2019**	SeqNo: **2009038**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	71.8	135			
Surr: DNOP	0.52		0.5000		104	70	130			

Sample ID: **MB-44702**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**							
Client ID: **PBW**	Batch ID: **44702**	RunNo: **59607**							
Prep Date: **5/3/2019**	Analysis Date: **5/3/2019**	SeqNo: **2009039**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		108	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R59627** RunNo: **59627**

Prep Date: Analysis Date: **5/3/2019** SeqNo: **2012291** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	20	1.0	20.00	0	98.0	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.4	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.1		10.00		91.2	70	130			

Sample ID: **1905120-003ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **OW-14** Batch ID: **R59627** RunNo: **59627**

Prep Date: Analysis Date: **5/3/2019** SeqNo: **2012300** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18000	50	1000	16410	140	70	130			ES
Toluene	1000	50	1000	0	100	70	130			
Chlorobenzene	1100	50	1000	0	106	70	130			
1,1-Dichloroethene	1000	50	1000	0	101	67.6	130			
Trichloroethene (TCE)	970	50	1000	0	96.8	70	130			
Surr: 1,2-Dichloroethane-d4	470		500.0		93.7	70	130			
Surr: 4-Bromofluorobenzene	490		500.0		98.0	70	130			
Surr: Dibromofluoromethane	540		500.0		108	70	130			
Surr: Toluene-d8	460		500.0		91.6	70	130			

Sample ID: **1905120-003amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **OW-14** Batch ID: **R59627** RunNo: **59627**

Prep Date: Analysis Date: **5/3/2019** SeqNo: **2012301** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17000	50	1000	16410	59.9	70	130	4.59	20	ES
Toluene	950	50	1000	0	95.5	70	130	4.60	20	
Chlorobenzene	970	50	1000	0	97.2	70	130	8.32	20	
1,1-Dichloroethene	960	50	1000	0	96.0	67.6	130	4.99	20	
Trichloroethene (TCE)	920	50	1000	0	92.1	70	130	4.89	20	
Surr: 1,2-Dichloroethane-d4	470		500.0		94.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	500		500.0		99.7	70	130	0	0	
Surr: Dibromofluoromethane	520		500.0		105	70	130	0	0	
Surr: Toluene-d8	440		500.0		88.3	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59627**	RunNo: **59627**
Prep Date:	Analysis Date: **5/3/2019**	SeqNo: **2012305** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	2.5	10								J
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	0.37	3.0								J
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59627**	RunNo: **59627**
Prep Date:	Analysis Date: **5/3/2019**	SeqNo: **2012305** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.8	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.3	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R59712**	RunNo: **59712**
Prep Date:	Analysis Date: **5/7/2019**	SeqNo: **2013349** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	19	1.0	20.00	0	93.9	70	130			
Chlorobenzene	19	1.0	20.00	0	96.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R59712**	RunNo: **59712**
Prep Date:	Analysis Date: **5/7/2019**	SeqNo: **2013349** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.9	70	130			
Surr: Dibromofluoromethane	12		10.00		115	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59712**	RunNo: **59712**
Prep Date:	Analysis Date: **5/7/2019**	SeqNo: **2013359** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	2.3	10								J
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	0.37	3.0								J
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59712**	RunNo: **59712**
Prep Date:	Analysis Date: **5/7/2019**	SeqNo: **2013359** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.15	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59712**	RunNo: **59712**
Prep Date:	Analysis Date: **5/7/2019**	SeqNo: **2013359** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.4		10.00		94.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905120**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G59627**	RunNo: **59627**
Prep Date:	Analysis Date: **5/3/2019**	SeqNo: **2009874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.6	70	130			
Surr: BFB	10		10.00		103	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G59627**	RunNo: **59627**
Prep Date:	Analysis Date: **5/3/2019**	SeqNo: **2009875** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		103	70	130			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G59712**	RunNo: **59712**
Prep Date:	Analysis Date: **5/7/2019**	SeqNo: **2013390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.6	70	130			
Surr: BFB	11		10.00		108	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G59712**	RunNo: **59712**
Prep Date:	Analysis Date: **5/7/2019**	SeqNo: **2013391** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		107	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905120** RcptNo: **1**

Received By: **Isaiah Ortiz** **5/2/2019 4:03:00 PM** I-OX

Completed By: **Erin Melendrez** **5/2/2019 4:17:35 PM**

Reviewed By: YG 5/3/19

LB: IO 5/3/19

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 18 (<2 or >12 unless noted)

Adjusted? NO

Checked by: JJC 5-3-19

Special Handling (if applicable)

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

Person Notified: Cheryl Johnson Date: 5/3/19

By Whom: Michelle Garcia Via: ☒ eMail ☒ Phone ☐ Fax ☐ In Person

Regarding: We did not recieve bottles for Anions for -003 → 006.

Client Instructions: Cancel anions for -003 → 006. Cancelled 8270 analysis, NO containers were provided.

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			
2	4.8	Good	Yes			
3	5.2	Good	Yes			
4	5.6	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2019 2nd QTR GW SAMPLING

Project #:

OW WELLS

Project Manager:

BRIAN MOORE

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: ☒ Yes ☐ No

Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905120	Analysis Request: 8260B	8015D (DRO/GRO/MRO)	8270 + Phenols – DUE 5/10/19	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Air Bubbles (Y or N)
5/1/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X								
5/1/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X								
5/1/2019	1019	AQUEOUS	OW-14	MISC	MISC	-003	X	X	X	X	X	X	X		
5/1/2019	1145	AQUEOUS	OW-13	MISC	MISC	-004	X	X	X	X	X	X	X		
5/1/2019	1350	AQUEOUS	OW-29	MISC	MISC	-005	X	X	X	X	X	X	X		
5/1/2019	1357	AQUEOUS	DUPLICATE	MISC	MISC	-006	X	X	X	X	X	X	X		
5/1/2019	1450	AQUEOUS	OW-50	MISC	MISC	-007	X	X	X	X	X	X	X		
5/1/2019	1535	AQUEOUS	OW-52	MISC	MISC	-008	X	X	X	X	X	X	X		

Date: 5/2/19 Time: 1340 Relinquished by: Received by: Date: 5/2/19 Time: 1345

Date: 5/2/19 Time: 1603 Relinquished by: Received by: COO Date: 5/2/19 Time: 1603

Remarks: 1. 4.3°C
2. 4.8°C
3. 5.2°C
4. 5.6°C

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

May 22, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 2nd QTR GW Sampling OrderNo.: 1905142

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 8 sample(s) on 5/2/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 7:00:00 AM
Lab ID: 1905142-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Naphthalene	0.28	0.28	2.0	J	µg/L	1	5/10/2019 4:17:40 PM	R5982(
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Acetone	4.1	1.2	10	J	µg/L	1	5/10/2019 4:17:40 PM	R5982(
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 7:00:00 AM
Lab ID: 1905142-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 4:17:40 PM	R5982(
Surr: 1,2-Dichloroethane-d4	86.5	0	70-130		%Rec	1	5/10/2019 4:17:40 PM	R5982(
Surr: 4-Bromofluorobenzene	96.0	0	70-130		%Rec	1	5/10/2019 4:17:40 PM	R5982(
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	5/10/2019 4:17:40 PM	R5982(
Surr: Toluene-d8	90.7	0	70-130		%Rec	1	5/10/2019 4:17:40 PM	R5982(

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Sampling
Collection Date:
Lab ID: 1905142-002
Matrix: TRIP BLANK
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Acetone	5.6	1.2	10	J	µg/L	1	5/10/2019 4:46:24 PM	R59820
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 4:46:24 PM	R59820
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 4:46:24 PM	R59820
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 4:46:24 PM	R59820

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Sampling
Collection Date:
Lab ID: 1905142-002
Matrix: TRIP BLANK
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 4:46:24 PM	R59820
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 4:46:24 PM	R59820
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 4:46:24 PM	R59820
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 4:46:24 PM	R59820
Surr: 1,2-Dichloroethane-d4	86.7	0	70-130		%Rec	1	5/10/2019 4:46:24 PM	R59820
Surr: 4-Bromofluorobenzene	93.2	0	70-130		%Rec	1	5/10/2019 4:46:24 PM	R59820
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	5/10/2019 4:46:24 PM	R59820
Surr: Toluene-d8	90.9	0	70-130		%Rec	1	5/10/2019 4:46:24 PM	R59820

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:48:00 AM
Lab ID: 1905142-003 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/6/2019 11:20:47 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.7	0.35	1.0		mg/L	1	5/4/2019 12:16:15 AM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2019 12:16:15 AM	44702
Surr: DNOP	123	0	70-130		%Rec	1	5/4/2019 12:16:15 AM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/13/2019 7:56:46 PM	R59849
Chloride	230	1.2	10		mg/L	20	5/13/2019 8:09:10 PM	R59849
Bromide	2.0	0.089	0.50		mg/L	5	5/13/2019 7:56:46 PM	R59849
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5	H	mg/L	5	5/13/2019 7:56:46 PM	R59849
Sulfate	32	0.27	2.5		mg/L	5	5/13/2019 7:56:46 PM	R59849
Nitrate+Nitrite as N	ND	0.047	1.0		mg/L	5	5/14/2019 12:29:46 AM	R59849
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.066	0.0025	0.020		mg/L	1	5/6/2019 4:02:46 PM	B59669
Barium	0.15	0.00065	0.0020		mg/L	1	5/6/2019 4:02:46 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 4:02:46 PM	B59669
Boron	0.59	0.0045	0.040		mg/L	1	5/6/2019 4:02:46 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 4:02:46 PM	B59669
Calcium	58	0.062	1.0		mg/L	1	5/6/2019 4:02:46 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 4:02:46 PM	B59669
Cobalt	0.088	0.0031	0.0060		mg/L	1	5/6/2019 4:02:46 PM	B59669
Copper	0.0050	0.0013	0.0060	J	mg/L	1	5/6/2019 4:02:46 PM	B59669
Iron	0.67	0.0087	0.020	*	mg/L	1	5/6/2019 4:02:46 PM	B59669
Magnesium	16	0.050	1.0		mg/L	1	5/6/2019 4:02:46 PM	B59669
Manganese	1.5	0.0014	0.010	*	mg/L	5	5/6/2019 4:04:47 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 4:02:46 PM	B59669
Nickel	0.33	0.0040	0.010	*	mg/L	1	5/6/2019 4:02:46 PM	B59669
Potassium	ND	0.16	1.0		mg/L	1	5/6/2019 4:02:46 PM	B59669
Silver	ND	0.00094	0.0050		mg/L	1	5/6/2019 4:02:46 PM	B59669
Sodium	410	2.1	5.0		mg/L	5	5/6/2019 4:04:47 PM	B59669
Zinc	0.048	0.0023	0.010		mg/L	1	5/6/2019 4:02:46 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.5	0.025	0.20	*	mg/L	10	5/16/2019 7:40:46 PM	44900
Barium	0.25	0.00065	0.0020		mg/L	1	5/15/2019 11:36:53 PM	44900
Beryllium	ND	0.00028	0.0020		mg/L	1	5/15/2019 11:36:53 PM	44900
Boron	0.62	0.0045	0.040		mg/L	1	5/15/2019 11:36:53 PM	44900
Cadmium	ND	0.00074	0.0020		mg/L	1	5/15/2019 11:36:53 PM	44900

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:48:00 AM
Lab ID: 1905142-003
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	0.0027	0.0015	0.0060	J	mg/L	1	5/15/2019 11:36:53 PM	44900
Cobalt	0.087	0.0031	0.0060		mg/L	1	5/15/2019 11:36:53 PM	44900
Copper	0.021	0.0041	0.0060		mg/L	1	5/15/2019 11:36:53 PM	44900
Iron	2.8	0.044	0.10	*	mg/L	5	5/16/2019 7:38:35 PM	44900
Manganese	1.5	0.0014	0.010	*	mg/L	5	5/16/2019 7:38:35 PM	44900
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/15/2019 11:36:53 PM	44900
Nickel	0.34	0.0040	0.010	*	mg/L	1	5/15/2019 11:36:53 PM	44900
Silver	ND	0.0014	0.0050		mg/L	1	5/15/2019 11:36:53 PM	44900
Zinc	0.0092	0.0058	0.010	J	mg/L	1	5/15/2019 11:36:53 PM	44900
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:22:33 PM	C59847
Arsenic	0.0031	0.00050	0.0050	J	mg/L	5	5/13/2019 3:22:33 PM	C59847
Lead	0.0054	0.00027	0.0025		mg/L	5	5/13/2019 3:22:33 PM	C59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 3:22:33 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 3:22:33 PM	C59847
Uranium	0.051	0.00037	0.0025	*	mg/L	5	5/13/2019 3:22:33 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/14/2019 3:56:35 PM	44900
Arsenic	0.0033	0.0016	0.0050	J	mg/L	5	5/14/2019 3:56:35 PM	44900
Lead	0.011	0.00027	0.0025		mg/L	5	5/14/2019 3:56:35 PM	44900
Selenium	ND	0.0024	0.0050		mg/L	5	5/14/2019 3:56:35 PM	44900
Thallium	ND	0.00026	0.0025		mg/L	5	5/14/2019 3:56:35 PM	44900
Uranium	0.052	0.00042	0.0025	*	mg/L	5	5/14/2019 3:56:35 PM	44900
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/14/2019 1:02:00 PM	44893
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Acenaphthylene	ND	6.2	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Aniline	ND	6.2	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Anthracene	ND	5.7	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Azobenzene	ND	6.7	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Benzoic acid	ND	6.3	20		µg/L	1	5/9/2019 8:09:10 PM	44729

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:48:00 AM
Lab ID: 1905142-003 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/9/2019 8:09:10 PM	44729
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Carbazole	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/9/2019 8:09:10 PM	44729
4-Chloroaniline	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2-Chlorophenol	ND	5.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Chrysene	ND	6.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Dibenzofuran	ND	6.9	10		µg/L	1	5/9/2019 8:09:10 PM	44729
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Diethyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/9/2019 8:09:10 PM	44729
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/9/2019 8:09:10 PM	44729
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/9/2019 8:09:10 PM	44729
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/9/2019 8:09:10 PM	44729
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Fluoranthene	ND	5.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Fluorene	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Hexachloroethane	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Isophorone	ND	6.2	10		µg/L	1	5/9/2019 8:09:10 PM	44729
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:48:00 AM
Lab ID: 1905142-003 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2-Methylphenol	ND	6.3	10		µg/L	1	5/9/2019 8:09:10 PM	44729
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/9/2019 8:09:10 PM	44729
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/9/2019 8:09:10 PM	44729
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/9/2019 8:09:10 PM	44729
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Naphthalene	ND	5.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2-Nitroaniline	ND	5.9	10		µg/L	1	5/9/2019 8:09:10 PM	44729
3-Nitroaniline	ND	6.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
4-Nitroaniline	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Nitrobenzene	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2-Nitrophenol	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
4-Nitrophenol	ND	5.6	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Pentachlorophenol	ND	5.3	20		µg/L	1	5/9/2019 8:09:10 PM	44729
Phenanthrene	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Phenol	ND	6.0	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Pyrene	ND	6.5	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Pyridine	ND	5.4	10		µg/L	1	5/9/2019 8:09:10 PM	44729
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/9/2019 8:09:10 PM	44729
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/9/2019 8:09:10 PM	44729
Surr: 2-Fluorophenol	41.3	0	15-101		%Rec	1	5/9/2019 8:09:10 PM	44729
Surr: Phenol-d5	32.6	0	15-84.6		%Rec	1	5/9/2019 8:09:10 PM	44729
Surr: 2,4,6-Tribromophenol	54.7	0	27.8-112		%Rec	1	5/9/2019 8:09:10 PM	44729
Surr: Nitrobenzene-d5	57.0	0	33-113		%Rec	1	5/9/2019 8:09:10 PM	44729
Surr: 2-Fluorobiphenyl	53.6	0	26.6-107		%Rec	1	5/9/2019 8:09:10 PM	44729
Surr: 4-Terphenyl-d14	64.7	0	18.7-148		%Rec	1	5/9/2019 8:09:10 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	100	0.83	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
Toluene	3.4	1.8	5.0	J	µg/L	5	5/10/2019 5:43:56 PM	R59820
Ethylbenzene	31	0.66	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
Methyl tert-butyl ether (MTBE)	1800	23	50		µg/L	50	5/10/2019 5:15:14 PM	R59820
1,2,4-Trimethylbenzene	16	1.1	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
Naphthalene	ND	1.4	10		µg/L	5	5/10/2019 5:43:56 PM	R59820
1-Methylnaphthalene	ND	1.6	20		µg/L	5	5/10/2019 5:43:56 PM	R59820
2-Methylnaphthalene	ND	1.7	20		µg/L	5	5/10/2019 5:43:56 PM	R59820

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PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:48:00 AM
Lab ID: 1905142-003 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	ND	6.0	50		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Bromobenzene	ND	1.2	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Bromoform	ND	1.4	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Bromomethane	ND	1.4	15		µg/L	5	5/10/2019 5:43:56 PM	R5982C
2-Butanone	ND	10	50		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Carbon disulfide	ND	2.3	50		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Chloroethane	ND	0.89	10		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Chloroform	ND	0.61	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Chloromethane	ND	1.6	15		µg/L	5	5/10/2019 5:43:56 PM	R5982C
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Dibromomethane	ND	1.0	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/10/2019 5:43:56 PM	R5982C
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
2-Hexanone	ND	7.7	50		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Isopropylbenzene	ND	0.96	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Methylene Chloride	ND	0.77	15		µg/L	5	5/10/2019 5:43:56 PM	R5982C
n-Butylbenzene	ND	1.1	15		µg/L	5	5/10/2019 5:43:56 PM	R5982C
n-Propylbenzene	3.0	1.1	5.0	J	µg/L	5	5/10/2019 5:43:56 PM	R5982C
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C
Styrene	ND	0.96	5.0		µg/L	5	5/10/2019 5:43:56 PM	R5982C

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:48:00 AM
Lab ID: 1905142-003 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/10/2019 5:43:56 PM	R59820
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/10/2019 5:43:56 PM	R59820
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/10/2019 5:43:56 PM	R59820
Xylenes, Total	ND	2.3	7.5		µg/L	5	5/10/2019 5:43:56 PM	R59820
Surr: 1,2-Dichloroethane-d4	87.8	0	70-130		%Rec	5	5/10/2019 5:43:56 PM	R59820
Surr: 4-Bromofluorobenzene	93.3	0	70-130		%Rec	5	5/10/2019 5:43:56 PM	R59820
Surr: Dibromofluoromethane	103	0	70-130		%Rec	5	5/10/2019 5:43:56 PM	R59820
Surr: Toluene-d8	89.5	0	70-130		%Rec	5	5/10/2019 5:43:56 PM	R59820
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	1.7	0.15	0.25		mg/L	5	5/10/2019 5:43:56 PM	G59820
Surr: BFB	107	0	70-130		%Rec	5	5/10/2019 5:43:56 PM	G59820

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:52:00 AM
Lab ID: 1905142-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/6/2019 11:36:00 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.7	0.35	1.0		mg/L	1	5/4/2019 12:38:21 AM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2019 12:38:21 AM	44702
Surr: DNOP	121	0	70-130		%Rec	1	5/4/2019 12:38:21 AM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/13/2019 8:21:35 PM	R59849
Chloride	240	1.2	10		mg/L	20	5/13/2019 8:34:00 PM	R59849
Bromide	2.0	0.089	0.50		mg/L	5	5/13/2019 8:21:35 PM	R59849
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5	H	mg/L	5	5/13/2019 8:21:35 PM	R59849
Sulfate	34	0.27	2.5		mg/L	5	5/13/2019 8:21:35 PM	R59849
Nitrate+Nitrite as N	ND	0.047	1.0		mg/L	5	5/14/2019 12:42:11 AM	R59849
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.073	0.0025	0.020		mg/L	1	5/6/2019 4:06:58 PM	B59669
Barium	0.15	0.00065	0.0020		mg/L	1	5/6/2019 4:06:58 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 4:06:58 PM	B59669
Boron	0.58	0.0045	0.040		mg/L	1	5/6/2019 4:06:58 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 4:06:58 PM	B59669
Calcium	59	0.062	1.0		mg/L	1	5/6/2019 4:06:58 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 4:06:58 PM	B59669
Cobalt	0.091	0.0031	0.0060		mg/L	1	5/6/2019 4:06:58 PM	B59669
Copper	0.0049	0.0013	0.0060	J	mg/L	1	5/6/2019 4:06:58 PM	B59669
Iron	0.64	0.0087	0.020	*	mg/L	1	5/6/2019 4:06:58 PM	B59669
Magnesium	16	0.050	1.0		mg/L	1	5/6/2019 4:06:58 PM	B59669
Manganese	1.5	0.0014	0.010	*	mg/L	5	5/6/2019 4:09:13 PM	B59669
Molybdenum	0.0070	0.0067	0.0080	J	mg/L	1	5/6/2019 4:06:58 PM	B59669
Nickel	0.33	0.0040	0.010	*	mg/L	1	5/6/2019 4:06:58 PM	B59669
Potassium	0.19	0.16	1.0	J	mg/L	1	5/6/2019 4:06:58 PM	B59669
Silver	ND	0.00094	0.0050		mg/L	1	5/6/2019 4:06:58 PM	B59669
Sodium	420	2.1	5.0		mg/L	5	5/6/2019 4:09:13 PM	B59669
Zinc	0.028	0.0023	0.010		mg/L	1	5/6/2019 4:06:58 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.0	0.025	0.20	*	mg/L	10	5/16/2019 7:51:58 PM	44900
Barium	0.24	0.00065	0.0020		mg/L	1	5/15/2019 11:38:54 PM	44900
Beryllium	ND	0.00028	0.0020		mg/L	1	5/15/2019 11:38:54 PM	44900
Boron	0.60	0.0045	0.040		mg/L	1	5/15/2019 11:38:54 PM	44900
Cadmium	ND	0.00074	0.0020		mg/L	1	5/15/2019 11:38:54 PM	44900

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:52:00 AM
Lab ID: 1905142-004
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	0.0024	0.0015	0.0060	J	mg/L	1	5/15/2019 11:38:54 PM	44900
Cobalt	0.087	0.0031	0.0060		mg/L	1	5/15/2019 11:38:54 PM	44900
Copper	0.025	0.0041	0.0060		mg/L	1	5/15/2019 11:38:54 PM	44900
Iron	2.5	0.044	0.10	*	mg/L	5	5/16/2019 7:43:04 PM	44900
Manganese	1.5	0.0014	0.010	*	mg/L	5	5/16/2019 7:43:04 PM	44900
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/15/2019 11:38:54 PM	44900
Nickel	0.32	0.0040	0.010	*	mg/L	1	5/15/2019 11:38:54 PM	44900
Silver	ND	0.0014	0.0050		mg/L	1	5/15/2019 11:38:54 PM	44900
Zinc	0.0059	0.0058	0.010	J	mg/L	1	5/15/2019 11:38:54 PM	44900
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:27:58 PM	C59847
Arsenic	0.0027	0.00050	0.0050	J	mg/L	5	5/13/2019 3:27:58 PM	C59847
Lead	0.0052	0.00027	0.0025		mg/L	5	5/13/2019 3:27:58 PM	C59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 3:27:58 PM	C59847
Thallium	0.00046	0.00024	0.0025	J	mg/L	5	5/13/2019 3:27:58 PM	C59847
Uranium	0.053	0.00037	0.0025	*	mg/L	5	5/13/2019 3:27:58 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/14/2019 3:58:47 PM	44900
Arsenic	0.0035	0.0016	0.0050	J	mg/L	5	5/14/2019 3:58:47 PM	44900
Lead	0.012	0.00027	0.0025		mg/L	5	5/14/2019 3:58:47 PM	44900
Selenium	ND	0.0024	0.0050		mg/L	5	5/14/2019 3:58:47 PM	44900
Thallium	ND	0.00026	0.0025		mg/L	5	5/14/2019 3:58:47 PM	44900
Uranium	0.052	0.00042	0.0025	*	mg/L	5	5/14/2019 3:58:47 PM	44900
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/14/2019 1:04:13 PM	44893
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Acenaphthylene	ND	6.2	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Aniline	ND	6.2	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Anthracene	ND	5.7	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Azobenzene	ND	6.7	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Benzoic acid	8.9	6.3	20	J	µg/L	1	5/9/2019 8:38:49 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:52:00 AM
Lab ID: 1905142-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/9/2019 8:38:49 PM	44729
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Carbazole	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/9/2019 8:38:49 PM	44729
4-Chloroaniline	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2-Chlorophenol	ND	5.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Chrysene	ND	6.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Dibenzofuran	ND	6.9	10		µg/L	1	5/9/2019 8:38:49 PM	44729
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Diethyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/9/2019 8:38:49 PM	44729
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/9/2019 8:38:49 PM	44729
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/9/2019 8:38:49 PM	44729
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/9/2019 8:38:49 PM	44729
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Fluoranthene	ND	5.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Fluorene	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Hexachloroethane	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Isophorone	ND	6.2	10		µg/L	1	5/9/2019 8:38:49 PM	44729
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:52:00 AM
Lab ID: 1905142-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2-Methylphenol	ND	6.3	10		µg/L	1	5/9/2019 8:38:49 PM	44729
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/9/2019 8:38:49 PM	44729
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/9/2019 8:38:49 PM	44729
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/9/2019 8:38:49 PM	44729
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Naphthalene	ND	5.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2-Nitroaniline	ND	5.9	10		µg/L	1	5/9/2019 8:38:49 PM	44729
3-Nitroaniline	ND	6.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
4-Nitroaniline	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Nitrobenzene	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2-Nitrophenol	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
4-Nitrophenol	ND	5.6	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Pentachlorophenol	ND	5.3	20		µg/L	1	5/9/2019 8:38:49 PM	44729
Phenanthrene	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Phenol	ND	6.0	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Pyrene	ND	6.5	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Pyridine	ND	5.4	10		µg/L	1	5/9/2019 8:38:49 PM	44729
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/9/2019 8:38:49 PM	44729
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/9/2019 8:38:49 PM	44729
Surr: 2-Fluorophenol	43.5	0	15-101		%Rec	1	5/9/2019 8:38:49 PM	44729
Surr: Phenol-d5	31.7	0	15-84.6		%Rec	1	5/9/2019 8:38:49 PM	44729
Surr: 2,4,6-Tribromophenol	55.0	0	27.8-112		%Rec	1	5/9/2019 8:38:49 PM	44729
Surr: Nitrobenzene-d5	61.0	0	33-113		%Rec	1	5/9/2019 8:38:49 PM	44729
Surr: 2-Fluorobiphenyl	53.5	0	26.6-107		%Rec	1	5/9/2019 8:38:49 PM	44729
Surr: 4-Terphenyl-d14	62.1	0	18.7-148		%Rec	1	5/9/2019 8:38:49 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	97	0.83	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
Toluene	3.1	1.8	5.0	J	µg/L	5	5/10/2019 6:41:15 PM	R59820
Ethylbenzene	28	0.66	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
Methyl tert-butyl ether (MTBE)	1700	23	50		µg/L	50	5/10/2019 6:12:36 PM	R59820
1,2,4-Trimethylbenzene	15	1.1	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
Naphthalene	ND	1.4	10		µg/L	5	5/10/2019 6:41:15 PM	R59820
1-Methylnaphthalene	ND	1.6	20		µg/L	5	5/10/2019 6:41:15 PM	R59820
2-Methylnaphthalene	ND	1.7	20		µg/L	5	5/10/2019 6:41:15 PM	R59820

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Lab ID: 1905142-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	ND	6.0	50		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Bromobenzene	ND	1.2	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Bromoform	ND	1.4	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Bromomethane	ND	1.4	15		µg/L	5	5/10/2019 6:41:15 PM	R5982C
2-Butanone	ND	10	50		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Carbon disulfide	ND	2.3	50		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Chloroethane	ND	0.89	10		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Chloroform	ND	0.61	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Chloromethane	ND	1.6	15		µg/L	5	5/10/2019 6:41:15 PM	R5982C
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Dibromomethane	ND	1.0	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/10/2019 6:41:15 PM	R5982C
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
2-Hexanone	ND	7.7	50		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Isopropylbenzene	ND	0.96	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Methylene Chloride	ND	0.77	15		µg/L	5	5/10/2019 6:41:15 PM	R5982C
n-Butylbenzene	ND	1.1	15		µg/L	5	5/10/2019 6:41:15 PM	R5982C
n-Propylbenzene	2.8	1.1	5.0	J	µg/L	5	5/10/2019 6:41:15 PM	R5982C
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C
Styrene	ND	0.96	5.0		µg/L	5	5/10/2019 6:41:15 PM	R5982C

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 8:52:00 AM
Lab ID: 1905142-004
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/10/2019 6:41:15 PM	R59820
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/10/2019 6:41:15 PM	R59820
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/10/2019 6:41:15 PM	R59820
Xylenes, Total	ND	2.3	7.5		µg/L	5	5/10/2019 6:41:15 PM	R59820
Surr: 1,2-Dichloroethane-d4	88.3	0	70-130		%Rec	5	5/10/2019 6:41:15 PM	R59820
Surr: 4-Bromofluorobenzene	95.5	0	70-130		%Rec	5	5/10/2019 6:41:15 PM	R59820
Surr: Dibromofluoromethane	105	0	70-130		%Rec	5	5/10/2019 6:41:15 PM	R59820
Surr: Toluene-d8	89.8	0	70-130		%Rec	5	5/10/2019 6:41:15 PM	R59820
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	1.6	0.15	0.25		mg/L	5	5/10/2019 6:41:15 PM	G59820
Surr: BFB	109	0	70-130		%Rec	5	5/10/2019 6:41:15 PM	G59820

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 9:44:00 AM
Lab ID: 1905142-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/6/2019 11:51:13 PM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.6	0.35	1.0		mg/L	1	5/4/2019 1:00:34 AM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2019 1:00:34 AM	44702
Surr: DNOP	119	0	70-130		%Rec	1	5/4/2019 1:00:34 AM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/13/2019 9:11:13 PM	R59849
Chloride	270	1.2	10		mg/L	20	5/13/2019 9:23:37 PM	R59849
Bromide	1.0	0.089	0.50		mg/L	5	5/13/2019 9:11:13 PM	R59849
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5	H	mg/L	5	5/13/2019 9:11:13 PM	R59849
Sulfate	2.6	0.27	2.5		mg/L	5	5/13/2019 9:11:13 PM	R59849
Nitrate+Nitrite as N	ND	0.047	1.0		mg/L	5	5/14/2019 12:54:36 AM	R59849
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.23	0.0025	0.020	*	mg/L	1	5/6/2019 4:11:24 PM	B59669
Barium	0.57	0.00065	0.0020		mg/L	1	5/6/2019 4:11:24 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 4:11:24 PM	B59669
Boron	0.44	0.0045	0.040		mg/L	1	5/6/2019 4:11:24 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 4:11:24 PM	B59669
Calcium	100	0.31	5.0		mg/L	5	5/6/2019 4:13:28 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 4:11:24 PM	B59669
Cobalt	0.014	0.0031	0.0060		mg/L	1	5/6/2019 4:11:24 PM	B59669
Copper	ND	0.0013	0.0060		mg/L	1	5/6/2019 4:11:24 PM	B59669
Iron	4.4	0.044	0.10	*	mg/L	5	5/6/2019 4:13:28 PM	B59669
Magnesium	27	0.050	1.0		mg/L	1	5/6/2019 4:11:24 PM	B59669
Manganese	3.8	0.0014	0.010	*	mg/L	5	5/6/2019 4:13:28 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 4:11:24 PM	B59669
Nickel	0.33	0.0040	0.010	*	mg/L	1	5/6/2019 4:11:24 PM	B59669
Potassium	ND	0.16	1.0		mg/L	1	5/6/2019 4:11:24 PM	B59669
Silver	0.0015	0.00094	0.0050	J	mg/L	1	5/6/2019 4:11:24 PM	B59669
Sodium	370	2.1	5.0		mg/L	5	5/6/2019 4:13:28 PM	B59669
Zinc	0.033	0.0023	0.010		mg/L	1	5/6/2019 4:11:24 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.8	0.025	0.20	*	mg/L	10	5/20/2019 6:11:19 PM	44900
Barium	0.63	0.00065	0.0020		mg/L	1	5/15/2019 11:40:55 PM	44900
Beryllium	0.00044	0.00028	0.0020	J	mg/L	1	5/15/2019 11:40:55 PM	44900
Boron	0.46	0.0045	0.040		mg/L	1	5/15/2019 11:40:55 PM	44900
Cadmium	ND	0.00074	0.0020		mg/L	1	5/15/2019 11:40:55 PM	44900

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 9:44:00 AM
Lab ID: 1905142-005
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	ND	0.0015	0.0060		mg/L	1	5/15/2019 11:40:55 PM	44900
Cobalt	0.022	0.0031	0.0060		mg/L	1	5/15/2019 11:40:55 PM	44900
Copper	ND	0.0041	0.0060		mg/L	1	5/15/2019 11:40:55 PM	44900
Iron	7.8	0.087	0.20	*	mg/L	10	5/20/2019 6:11:19 PM	44900
Manganese	3.6	0.0014	0.010	*	mg/L	5	5/16/2019 7:54:16 PM	44900
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/15/2019 11:40:55 PM	44900
Nickel	0.32	0.0040	0.010	*	mg/L	1	5/15/2019 11:40:55 PM	44900
Silver	ND	0.0014	0.0050		mg/L	1	5/15/2019 11:40:55 PM	44900
Zinc	0.010	0.0058	0.010	J	mg/L	1	5/15/2019 11:40:55 PM	44900
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:30:41 PM	C59847
Arsenic	0.0047	0.00050	0.0050	J	mg/L	5	5/13/2019 3:30:41 PM	C59847
Lead	0.00049	0.00027	0.0025	J	mg/L	5	5/13/2019 3:30:41 PM	C59847
Selenium	0.0010	0.00086	0.0050	J	mg/L	5	5/13/2019 3:30:41 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 3:30:41 PM	C59847
Uranium	0.0038	0.00037	0.0025		mg/L	5	5/13/2019 3:30:41 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/14/2019 4:00:59 PM	44900
Arsenic	0.0064	0.0016	0.0050		mg/L	5	5/14/2019 4:00:59 PM	44900
Lead	0.0046	0.00027	0.0025		mg/L	5	5/14/2019 4:00:59 PM	44900
Selenium	ND	0.0024	0.0050		mg/L	5	5/14/2019 4:00:59 PM	44900
Thallium	ND	0.00026	0.0025		mg/L	5	5/14/2019 4:00:59 PM	44900
Uranium	0.0046	0.00042	0.0025		mg/L	5	5/14/2019 4:00:59 PM	44900
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/14/2019 1:06:27 PM	44893
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Acenaphthylene	ND	6.2	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Aniline	ND	6.2	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Anthracene	ND	5.7	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Azobenzene	ND	6.7	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Benzoic acid	ND	6.3	20		µg/L	1	5/9/2019 9:08:23 PM	44729

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 9:44:00 AM
Lab ID: 1905142-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/9/2019 9:08:23 PM	44729
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Carbazole	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/9/2019 9:08:23 PM	44729
4-Chloroaniline	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2-Chlorophenol	ND	5.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Chrysene	ND	6.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Dibenzofuran	ND	6.9	10		µg/L	1	5/9/2019 9:08:23 PM	44729
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Diethyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/9/2019 9:08:23 PM	44729
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/9/2019 9:08:23 PM	44729
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/9/2019 9:08:23 PM	44729
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/9/2019 9:08:23 PM	44729
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Fluoranthene	ND	5.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Fluorene	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Hexachloroethane	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Isophorone	ND	6.2	10		µg/L	1	5/9/2019 9:08:23 PM	44729
1-Methylnaphthalene	17	7.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 9:44:00 AM
Lab ID: 1905142-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	6.9	6.3	10	J	µg/L	1	5/9/2019 9:08:23 PM	44729
2-Methylphenol	ND	6.3	10		µg/L	1	5/9/2019 9:08:23 PM	44729
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/9/2019 9:08:23 PM	44729
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/9/2019 9:08:23 PM	44729
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/9/2019 9:08:23 PM	44729
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Naphthalene	26	5.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2-Nitroaniline	ND	5.9	10		µg/L	1	5/9/2019 9:08:23 PM	44729
3-Nitroaniline	ND	6.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
4-Nitroaniline	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Nitrobenzene	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2-Nitrophenol	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
4-Nitrophenol	ND	5.6	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Pentachlorophenol	ND	5.3	20		µg/L	1	5/9/2019 9:08:23 PM	44729
Phenanthrene	ND	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Phenol	34	6.0	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Pyrene	ND	6.5	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Pyridine	ND	5.4	10		µg/L	1	5/9/2019 9:08:23 PM	44729
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/9/2019 9:08:23 PM	44729
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/9/2019 9:08:23 PM	44729
Surr: 2-Fluorophenol	42.0	0	15-101		%Rec	1	5/9/2019 9:08:23 PM	44729
Surr: Phenol-d5	35.7	0	15-84.6		%Rec	1	5/9/2019 9:08:23 PM	44729
Surr: 2,4,6-Tribromophenol	64.6	0	27.8-112		%Rec	1	5/9/2019 9:08:23 PM	44729
Surr: Nitrobenzene-d5	63.6	0	33-113		%Rec	1	5/9/2019 9:08:23 PM	44729
Surr: 2-Fluorobiphenyl	56.9	0	26.6-107		%Rec	1	5/9/2019 9:08:23 PM	44729
Surr: 4-Terphenyl-d14	69.4	0	18.7-148		%Rec	1	5/9/2019 9:08:23 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	9000	83	500		µg/L	500	5/10/2019 7:09:51 PM	R59820
Toluene	700	18	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
Ethylbenzene	660	6.6	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
Methyl tert-butyl ether (MTBE)	1600	23	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,2,4-Trimethylbenzene	150	11	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,3,5-Trimethylbenzene	28	9.4	50	J	µg/L	50	5/10/2019 7:38:25 PM	R59820
1,2-Dichloroethane (EDC)	ND	9.7	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,2-Dibromoethane (EDB)	ND	8.3	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
Naphthalene	34	14	100	J	µg/L	50	5/10/2019 7:38:25 PM	R59820
1-Methylnaphthalene	21	16	200	J	µg/L	50	5/10/2019 7:38:25 PM	R59820
2-Methylnaphthalene	ND	17	200		µg/L	50	5/10/2019 7:38:25 PM	R59820

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 9:44:00 AM
Lab ID: 1905142-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	ND	60	500		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Bromobenzene	ND	12	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Bromodichloromethane	ND	6.7	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Bromoform	ND	14	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Bromomethane	ND	14	150		µg/L	50	5/10/2019 7:38:25 PM	R5982C
2-Butanone	ND	100	500		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Carbon disulfide	ND	23	500		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Carbon Tetrachloride	ND	7.0	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Chlorobenzene	ND	9.7	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Chloroethane	ND	8.9	100		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Chloroform	ND	6.1	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Chloromethane	ND	16	150		µg/L	50	5/10/2019 7:38:25 PM	R5982C
2-Chlorotoluene	ND	12	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
4-Chlorotoluene	ND	12	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
cis-1,2-DCE	ND	9.5	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
cis-1,3-Dichloropropene	ND	6.9	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,2-Dibromo-3-chloropropane	ND	16	100		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Dibromochloromethane	ND	12	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Dibromomethane	ND	10	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,2-Dichlorobenzene	ND	15	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,3-Dichlorobenzene	ND	12	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,4-Dichlorobenzene	ND	15	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Dichlorodifluoromethane	ND	13	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,1-Dichloroethane	ND	7.0	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,1-Dichloroethene	ND	10	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,2-Dichloropropane	ND	10	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,3-Dichloropropane	ND	10	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
2,2-Dichloropropane	ND	12	100		µg/L	50	5/10/2019 7:38:25 PM	R5982C
1,1-Dichloropropene	ND	8.1	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Hexachlorobutadiene	ND	15	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
2-Hexanone	ND	77	500		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Isopropylbenzene	18	9.6	50	J	µg/L	50	5/10/2019 7:38:25 PM	R5982C
4-Isopropyltoluene	ND	11	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
4-Methyl-2-pentanone	ND	36	500		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Methylene Chloride	ND	7.7	150		µg/L	50	5/10/2019 7:38:25 PM	R5982C
n-Butylbenzene	ND	11	150		µg/L	50	5/10/2019 7:38:25 PM	R5982C
n-Propylbenzene	51	11	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
sec-Butylbenzene	ND	12	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C
Styrene	ND	9.6	50		µg/L	50	5/10/2019 7:38:25 PM	R5982C

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-55
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 9:44:00 AM
Lab ID: 1905142-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	10	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,1,1,2-Tetrachloroethane	ND	10	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,1,2,2-Tetrachloroethane	ND	27	100		µg/L	50	5/10/2019 7:38:25 PM	R59820
Tetrachloroethene (PCE)	ND	7.5	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
trans-1,2-DCE	ND	9.0	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
trans-1,3-Dichloropropene	ND	8.3	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,2,3-Trichlorobenzene	ND	15	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,2,4-Trichlorobenzene	ND	9.8	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,1,1-Trichloroethane	ND	8.6	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,1,2-Trichloroethane	ND	11	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
Trichloroethene (TCE)	ND	8.3	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
Trichlorofluoromethane	ND	9.5	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
1,2,3-Trichloropropane	ND	15	100		µg/L	50	5/10/2019 7:38:25 PM	R59820
Vinyl chloride	ND	9.0	50		µg/L	50	5/10/2019 7:38:25 PM	R59820
Xylenes, Total	560	23	75		µg/L	50	5/10/2019 7:38:25 PM	R59820
Surr: 1,2-Dichloroethane-d4	89.8	0	70-130		%Rec	50	5/10/2019 7:38:25 PM	R59820
Surr: 4-Bromofluorobenzene	94.0	0	70-130		%Rec	50	5/10/2019 7:38:25 PM	R59820
Surr: Dibromofluoromethane	104	0	70-130		%Rec	50	5/10/2019 7:38:25 PM	R59820
Surr: Toluene-d8	91.3	0	70-130		%Rec	50	5/10/2019 7:38:25 PM	R59820
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	23	1.5	2.5		mg/L	50	5/10/2019 7:38:25 PM	G59820
Surr: BFB	107	0	70-130		%Rec	50	5/10/2019 7:38:25 PM	G59820

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:10:00 PM
Lab ID: 1905142-006
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/7/2019 12:06:25 AM	44732
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/4/2019 1:22:33 AM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2019 1:22:33 AM	44702
Surr: DNOP	120	0	70-130		%Rec	1	5/4/2019 1:22:33 AM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.31	0.25	0.50	J	mg/L	5	5/13/2019 9:36:02 PM	R59849
Chloride	710	3.1	25		mg/L	50	5/14/2019 8:00:07 PM	A59880
Bromide	1.9	0.089	0.50		mg/L	5	5/13/2019 9:36:02 PM	R59849
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5	H	mg/L	5	5/13/2019 9:36:02 PM	R59849
Sulfate	22	0.27	2.5		mg/L	5	5/13/2019 9:36:02 PM	R59849
Nitrate+Nitrite as N	ND	0.047	1.0		mg/L	5	5/14/2019 1:07:01 AM	R59849
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.041	0.0025	0.020		mg/L	1	5/6/2019 4:15:42 PM	B59669
Barium	0.24	0.00065	0.0020		mg/L	1	5/6/2019 4:15:42 PM	B59669
Beryllium	ND	0.00028	0.0020		mg/L	1	5/6/2019 4:15:42 PM	B59669
Boron	0.51	0.0045	0.040		mg/L	1	5/6/2019 4:15:42 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 4:15:42 PM	B59669
Calcium	95	0.062	1.0		mg/L	1	5/6/2019 4:15:42 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 4:15:42 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 4:15:42 PM	B59669
Copper	0.0065	0.0013	0.0060		mg/L	1	5/6/2019 4:15:42 PM	B59669
Iron	0.041	0.0087	0.020		mg/L	1	5/6/2019 4:15:42 PM	B59669
Magnesium	17	0.050	1.0		mg/L	1	5/6/2019 4:15:42 PM	B59669
Manganese	0.064	0.00029	0.0020	*	mg/L	1	5/6/2019 4:15:42 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 4:15:42 PM	B59669
Nickel	0.077	0.0040	0.010		mg/L	1	5/6/2019 4:15:42 PM	B59669
Potassium	1.1	0.16	1.0		mg/L	1	5/6/2019 4:15:42 PM	B59669
Silver	0.0019	0.00094	0.0050	J	mg/L	1	5/6/2019 4:15:42 PM	B59669
Sodium	510	4.2	10		mg/L	10	5/6/2019 6:02:18 PM	C59669
Zinc	0.046	0.0023	0.010		mg/L	1	5/6/2019 4:15:42 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.2	0.025	0.20	*	mg/L	10	5/16/2019 8:00:34 PM	44900
Barium	0.49	0.00065	0.0020		mg/L	1	5/15/2019 11:53:22 PM	44900
Beryllium	0.0010	0.00028	0.0020	J	mg/L	1	5/15/2019 11:53:22 PM	44900
Boron	0.51	0.0045	0.040		mg/L	1	5/15/2019 11:53:22 PM	44900
Cadmium	ND	0.00074	0.0020		mg/L	1	5/15/2019 11:53:22 PM	44900

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:10:00 PM
Lab ID: 1905142-006
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Chromium	0.0049	0.0015	0.0060	J	mg/L	1	5/15/2019 11:53:22 PM	44900
Cobalt	0.0045	0.0031	0.0060	J	mg/L	1	5/15/2019 11:53:22 PM	44900
Copper	0.0076	0.0041	0.0060		mg/L	1	5/15/2019 11:53:22 PM	44900
Iron	4.0	0.044	0.10	*	mg/L	5	5/16/2019 7:58:34 PM	44900
Manganese	0.25	0.00029	0.0020	*	mg/L	1	5/15/2019 11:53:22 PM	44900
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/15/2019 11:53:22 PM	44900
Nickel	0.081	0.0040	0.010		mg/L	1	5/15/2019 11:53:22 PM	44900
Silver	0.0014	0.0014	0.0050	J	mg/L	1	5/15/2019 11:53:22 PM	44900
Zinc	0.015	0.0058	0.010		mg/L	1	5/15/2019 11:53:22 PM	44900
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:36:07 PM	C59847
Arsenic	0.0015	0.00050	0.0050	J	mg/L	5	5/13/2019 3:36:07 PM	C59847
Lead	ND	0.00027	0.0025		mg/L	5	5/13/2019 3:36:07 PM	C59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 3:36:07 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 3:36:07 PM	C59847
Uranium	0.016	0.00037	0.0025		mg/L	5	5/13/2019 3:36:07 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/14/2019 4:03:10 PM	44900
Arsenic	0.0038	0.0016	0.0050	J	mg/L	5	5/14/2019 4:03:10 PM	44900
Lead	0.0044	0.00027	0.0025		mg/L	5	5/14/2019 4:03:10 PM	44900
Selenium	ND	0.0024	0.0050		mg/L	5	5/14/2019 4:03:10 PM	44900
Thallium	ND	0.00026	0.0025		mg/L	5	5/14/2019 4:03:10 PM	44900
Uranium	0.019	0.00042	0.0025		mg/L	5	5/14/2019 4:03:10 PM	44900
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/14/2019 1:08:42 PM	44893
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Acenaphthylene	ND	6.2	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Aniline	ND	6.2	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Anthracene	ND	5.7	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Azobenzene	ND	6.7	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Benzoic acid	ND	6.3	20		µg/L	1	5/9/2019 10:36:53 PM	44729

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:10:00 PM
Lab ID: 1905142-006
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzyl alcohol	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/9/2019 10:36:53 PM	44729
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Carbazole	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/9/2019 10:36:53 PM	44729
4-Chloroaniline	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2-Chlorophenol	ND	5.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Chrysene	ND	6.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Dibenzofuran	ND	6.9	10		µg/L	1	5/9/2019 10:36:53 PM	44729
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Diethyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/9/2019 10:36:53 PM	44729
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/9/2019 10:36:53 PM	44729
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/9/2019 10:36:53 PM	44729
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/9/2019 10:36:53 PM	44729
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Fluoranthene	ND	5.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Fluorene	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Hexachloroethane	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Isophorone	ND	6.2	10		µg/L	1	5/9/2019 10:36:53 PM	44729
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:10:00 PM
Lab ID: 1905142-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2-Methylphenol	ND	6.3	10		µg/L	1	5/9/2019 10:36:53 PM	44729
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/9/2019 10:36:53 PM	44729
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/9/2019 10:36:53 PM	44729
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/9/2019 10:36:53 PM	44729
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Naphthalene	ND	5.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2-Nitroaniline	ND	5.9	10		µg/L	1	5/9/2019 10:36:53 PM	44729
3-Nitroaniline	ND	6.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
4-Nitroaniline	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Nitrobenzene	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2-Nitrophenol	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
4-Nitrophenol	ND	5.6	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Pentachlorophenol	ND	5.3	20		µg/L	1	5/9/2019 10:36:53 PM	44729
Phenanthrene	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Phenol	ND	6.0	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Pyrene	ND	6.5	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Pyridine	ND	5.4	10		µg/L	1	5/9/2019 10:36:53 PM	44729
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/9/2019 10:36:53 PM	44729
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/9/2019 10:36:53 PM	44729
Surr: 2-Fluorophenol	47.1	0	15-101		%Rec	1	5/9/2019 10:36:53 PM	44729
Surr: Phenol-d5	34.5	0	15-84.6		%Rec	1	5/9/2019 10:36:53 PM	44729
Surr: 2,4,6-Tribromophenol	60.7	0	27.8-112		%Rec	1	5/9/2019 10:36:53 PM	44729
Surr: Nitrobenzene-d5	65.7	0	33-113		%Rec	1	5/9/2019 10:36:53 PM	44729
Surr: 2-Fluorobiphenyl	60.5	0	26.6-107		%Rec	1	5/9/2019 10:36:53 PM	44729
Surr: 4-Terphenyl-d14	75.1	0	18.7-148		%Rec	1	5/9/2019 10:36:53 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.78	0.17	1.0	J	µg/L	1	5/10/2019 8:06:58 PM	R59820
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Methyl tert-butyl ether (MTBE)	46	0.46	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,2,4-Trimethylbenzene	0.25	0.21	1.0	J	µg/L	1	5/10/2019 8:06:58 PM	R59820
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,2-Dichloroethane (EDC)	4.1	0.19	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 8:06:58 PM	R59820

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:10:00 PM
Lab ID: 1905142-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Acetone	15	1.2	10		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Isopropylbenzene	0.81	0.19	1.0	J	µg/L	1	5/10/2019 8:06:58 PM	R5982C
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 8:06:58 PM	R5982C

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:10:00 PM
Lab ID: 1905142-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 8:06:58 PM	R59820
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 8:06:58 PM	R59820
Surr: 1,2-Dichloroethane-d4	88.0	0	70-130		%Rec	1	5/10/2019 8:06:58 PM	R59820
Surr: 4-Bromofluorobenzene	96.1	0	70-130		%Rec	1	5/10/2019 8:06:58 PM	R59820
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	5/10/2019 8:06:58 PM	R59820
Surr: Toluene-d8	89.6	0	70-130		%Rec	1	5/10/2019 8:06:58 PM	R59820
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.22	0.031	0.050		mg/L	1	5/10/2019 8:06:58 PM	G59820
Surr: BFB	113	0	70-130		%Rec	1	5/10/2019 8:06:58 PM	G59820

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 11:08:00 AM
Lab ID: 1905142-007 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.61	0.35	1.0	J	mg/L	1	5/4/2019 2:06:51 AM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2019 2:06:51 AM	44702
Surr: DNOP	126	0	70-130		%Rec	1	5/4/2019 2:06:51 AM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/13/2019 10:00:51 PM	R59849
Chloride	2100	12	100		mg/L	200	5/14/2019 8:12:59 PM	A59880
Bromide	2.4	0.089	0.50		mg/L	5	5/13/2019 10:00:51 PM	R59849
Phosphorus, Orthophosphate (As P)	ND	0.80	10	H	mg/L	20	5/13/2019 10:13:15 PM	R59849
Sulfate	2700	11	100		mg/L	200	5/14/2019 8:12:59 PM	A59880
Nitrate+Nitrite as N	ND	0.095	2.0		mg/L	10	5/14/2019 9:30:10 PM	A59880
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.21	0.0025	0.020	*	mg/L	1	5/6/2019 4:20:17 PM	B59669
Barium	0.013	0.00065	0.0020		mg/L	1	5/6/2019 4:20:17 PM	B59669
Beryllium	0.00041	0.00028	0.0020	J	mg/L	1	5/6/2019 4:20:17 PM	B59669
Boron	2.5	0.023	0.20		mg/L	5	5/6/2019 4:31:35 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 4:20:17 PM	B59669
Calcium	230	0.31	5.0		mg/L	5	5/6/2019 4:31:35 PM	B59669
Chromium	ND	0.0015	0.0060		mg/L	1	5/6/2019 4:20:17 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 4:20:17 PM	B59669
Copper	0.0038	0.0013	0.0060	J	mg/L	1	5/6/2019 4:20:17 PM	B59669
Iron	0.12	0.0087	0.020		mg/L	1	5/6/2019 4:20:17 PM	B59669
Magnesium	64	0.050	1.0		mg/L	1	5/6/2019 4:20:17 PM	B59669
Manganese	0.053	0.00029	0.0020	*	mg/L	1	5/6/2019 4:20:17 PM	B59669
Molybdenum	0.022	0.0067	0.0080		mg/L	1	5/6/2019 4:20:17 PM	B59669
Nickel	0.020	0.0040	0.010		mg/L	1	5/6/2019 4:20:17 PM	B59669
Potassium	0.66	0.16	1.0	J	mg/L	1	5/6/2019 4:20:17 PM	B59669
Silver	0.0042	0.00094	0.0050	J	mg/L	1	5/6/2019 4:20:17 PM	B59669
Sodium	2400	21	50		mg/L	50	5/6/2019 6:04:27 PM	C59669
Zinc	0.050	0.0023	0.010		mg/L	1	5/6/2019 4:20:17 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	27	0.12	1.0	*	mg/L	50	5/16/2019 8:04:52 PM	44900
Barium	0.41	0.00065	0.0020		mg/L	1	5/15/2019 11:55:24 PM	44900
Beryllium	0.0014	0.00028	0.0020	J	mg/L	1	5/15/2019 11:55:24 PM	44900
Boron	2.5	0.023	0.20		mg/L	5	5/16/2019 8:02:52 PM	44900
Cadmium	ND	0.00074	0.0020		mg/L	1	5/15/2019 11:55:24 PM	44900
Chromium	0.014	0.0015	0.0060		mg/L	1	5/15/2019 11:55:24 PM	44900
Cobalt	0.0033	0.0031	0.0060	J	mg/L	1	5/15/2019 11:55:24 PM	44900
Copper	0.010	0.0041	0.0060		mg/L	1	5/15/2019 11:55:24 PM	44900

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 11:08:00 AM
Lab ID: 1905142-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Iron	11	0.44	1.0	*	mg/L	50	5/16/2019 8:04:52 PM	44900
Manganese	0.54	0.00029	0.0020	*	mg/L	1	5/15/2019 11:55:24 PM	44900
Molybdenum	0.012	0.0067	0.0080		mg/L	1	5/15/2019 11:55:24 PM	44900
Nickel	0.034	0.0040	0.010		mg/L	1	5/15/2019 11:55:24 PM	44900
Silver	0.0044	0.0014	0.0050	J	mg/L	1	5/15/2019 11:55:24 PM	44900
Zinc	0.023	0.0058	0.010		mg/L	1	5/15/2019 11:55:24 PM	44900
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:44:19 PM	C59847
Arsenic	0.0040	0.00050	0.0050	J	mg/L	5	5/13/2019 3:44:19 PM	C59847
Lead	0.00036	0.00027	0.0025	J	mg/L	5	5/13/2019 3:44:19 PM	C59847
Selenium	0.0022	0.00086	0.0050	J	mg/L	5	5/13/2019 3:44:19 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 3:44:19 PM	C59847
Uranium	0.14	0.00075	0.0050	*	mg/L	10	5/13/2019 4:17:15 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/14/2019 4:05:22 PM	44900
Arsenic	0.0095	0.0016	0.0050		mg/L	5	5/14/2019 4:05:22 PM	44900
Lead	0.0095	0.00027	0.0025		mg/L	5	5/14/2019 4:05:22 PM	44900
Selenium	0.0038	0.0024	0.0050	J	mg/L	5	5/14/2019 4:05:22 PM	44900
Thallium	ND	0.00026	0.0025		mg/L	5	5/14/2019 4:05:22 PM	44900
Uranium	0.14	0.00085	0.0050	*	mg/L	10	5/14/2019 4:31:43 PM	44900
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/14/2019 1:10:57 PM	44893
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Acenaphthylene	ND	6.2	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Aniline	ND	6.2	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Anthracene	ND	5.7	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Azobenzene	ND	6.7	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Benzoic acid	ND	6.3	20		µg/L	1	5/9/2019 11:06:22 PM	44729
Benzyl alcohol	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 11:08:00 AM
Lab ID: 1905142-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/9/2019 11:06:22 PM	44729
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Carbazole	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/9/2019 11:06:22 PM	44729
4-Chloroaniline	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2-Chlorophenol	ND	5.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Chrysene	ND	6.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Dibenzofuran	ND	6.9	10		µg/L	1	5/9/2019 11:06:22 PM	44729
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Diethyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/9/2019 11:06:22 PM	44729
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/9/2019 11:06:22 PM	44729
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/9/2019 11:06:22 PM	44729
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/9/2019 11:06:22 PM	44729
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Fluoranthene	ND	5.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Fluorene	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Hexachloroethane	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Isophorone	ND	6.2	10		µg/L	1	5/9/2019 11:06:22 PM	44729
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2-Methylphenol	ND	6.3	10		µg/L	1	5/9/2019 11:06:22 PM	44729
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/9/2019 11:06:22 PM	44729

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 11:08:00 AM
Lab ID: 1905142-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/9/2019 11:06:22 PM	44729
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/9/2019 11:06:22 PM	44729
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Naphthalene	ND	5.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2-Nitroaniline	ND	5.9	10		µg/L	1	5/9/2019 11:06:22 PM	44729
3-Nitroaniline	ND	6.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
4-Nitroaniline	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Nitrobenzene	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2-Nitrophenol	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
4-Nitrophenol	ND	5.6	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Pentachlorophenol	ND	5.3	20		µg/L	1	5/9/2019 11:06:22 PM	44729
Phenanthrene	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Phenol	ND	6.0	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Pyrene	ND	6.5	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Pyridine	ND	5.4	10		µg/L	1	5/9/2019 11:06:22 PM	44729
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/9/2019 11:06:22 PM	44729
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/9/2019 11:06:22 PM	44729
Surr: 2-Fluorophenol	18.2	0	15-101		%Rec	1	5/9/2019 11:06:22 PM	44729
Surr: Phenol-d5	29.8	0	15-84.6		%Rec	1	5/9/2019 11:06:22 PM	44729
Surr: 2,4,6-Tribromophenol	19.9	0	27.8-112	S	%Rec	1	5/9/2019 11:06:22 PM	44729
Surr: Nitrobenzene-d5	54.5	0	33-113		%Rec	1	5/9/2019 11:06:22 PM	44729
Surr: 2-Fluorobiphenyl	47.0	0	26.6-107		%Rec	1	5/9/2019 11:06:22 PM	44729
Surr: 4-Terphenyl-d14	66.3	0	18.7-148		%Rec	1	5/9/2019 11:06:22 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
Methyl tert-butyl ether (MTBE)	10	0.46	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
1,2,4-Trimethylbenzene	0.30	0.21	1.0	J	µg/L	1	5/10/2019 8:35:31 PM	R5982(
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
Acetone	7.1	1.2	10	J	µg/L	1	5/10/2019 8:35:31 PM	R5982(
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982(

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 11:08:00 AM
Lab ID: 1905142-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 8:35:31 PM	R5982C

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CLIENT: MARATHON GALLUP
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Lab ID: 1905142-007
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 8:35:31 PM	R59820
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 8:35:31 PM	R59820
Surr: 1,2-Dichloroethane-d4	87.1	0	70-130		%Rec	1	5/10/2019 8:35:31 PM	R59820
Surr: 4-Bromofluorobenzene	166	0	70-130	S	%Rec	1	5/10/2019 8:35:31 PM	R59820
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	5/10/2019 8:35:31 PM	R59820
Surr: Toluene-d8	90.5	0	70-130		%Rec	1	5/10/2019 8:35:31 PM	R59820
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	2.2	0.031	0.050		mg/L	1	5/10/2019 8:35:31 PM	G59820
Surr: BFB	183	0	70-130	S	%Rec	1	5/10/2019 8:35:31 PM	G59820

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:30:00 PM
Lab ID: 1905142-008
Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/4/2019 2:28:56 AM	44702
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2019 2:28:56 AM	44702
Surr: DNOP	118	0	70-130		%Rec	1	5/4/2019 2:28:56 AM	44702
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.40	0.25	0.50	J	mg/L	5	5/13/2019 10:25:40 PM	R59849
Chloride	1800	12	100		mg/L	200	5/14/2019 8:25:51 PM	A59880
Bromide	4.4	0.089	0.50		mg/L	5	5/13/2019 10:25:40 PM	R59849
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5	H	mg/L	5	5/13/2019 10:25:40 PM	R59849
Sulfate	640	1.1	10		mg/L	20	5/13/2019 10:38:05 PM	R59849
Nitrate+Nitrite as N	15	0.095	2.0	*	mg/L	10	5/14/2019 9:43:03 PM	A59880
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.60	0.0025	0.020	*	mg/L	1	5/6/2019 4:33:48 PM	B59669
Barium	0.042	0.00065	0.0020		mg/L	1	5/6/2019 4:33:48 PM	B59669
Beryllium	0.00036	0.00028	0.0020	J	mg/L	1	5/6/2019 4:33:48 PM	B59669
Boron	2.5	0.023	0.20		mg/L	5	5/6/2019 4:36:00 PM	B59669
Cadmium	ND	0.00055	0.0020		mg/L	1	5/6/2019 4:33:48 PM	B59669
Calcium	110	0.31	5.0		mg/L	5	5/6/2019 4:36:00 PM	B59669
Chromium	0.0030	0.0015	0.0060	J	mg/L	1	5/6/2019 4:33:48 PM	B59669
Cobalt	ND	0.0031	0.0060		mg/L	1	5/6/2019 4:33:48 PM	B59669
Copper	0.0038	0.0013	0.0060	J	mg/L	1	5/6/2019 4:33:48 PM	B59669
Iron	0.12	0.0087	0.020		mg/L	1	5/6/2019 4:33:48 PM	B59669
Magnesium	16	0.050	1.0		mg/L	1	5/6/2019 4:33:48 PM	B59669
Manganese	0.040	0.00029	0.0020		mg/L	1	5/6/2019 4:33:48 PM	B59669
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/6/2019 4:33:48 PM	B59669
Nickel	ND	0.0040	0.010		mg/L	1	5/6/2019 4:33:48 PM	B59669
Potassium	3.5	0.16	1.0		mg/L	1	5/6/2019 4:33:48 PM	B59669
Silver	0.0022	0.00094	0.0050	J	mg/L	1	5/6/2019 4:33:48 PM	B59669
Sodium	1500	8.3	20		mg/L	20	5/6/2019 6:06:36 PM	C59669
Zinc	0.019	0.0023	0.010		mg/L	1	5/6/2019 4:33:48 PM	B59669
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	60	0.25	2.0	*	mg/L	100	5/16/2019 8:11:21 PM	44900
Barium	0.82	0.00065	0.0020		mg/L	1	5/15/2019 11:57:33 PM	44900
Beryllium	0.0026	0.00028	0.0020		mg/L	1	5/15/2019 11:57:33 PM	44900
Boron	2.3	0.023	0.20		mg/L	5	5/16/2019 8:07:10 PM	44900
Cadmium	ND	0.00074	0.0020		mg/L	1	5/15/2019 11:57:33 PM	44900
Chromium	0.031	0.0015	0.0060		mg/L	1	5/15/2019 11:57:33 PM	44900
Cobalt	0.0092	0.0031	0.0060		mg/L	1	5/15/2019 11:57:33 PM	44900
Copper	0.0072	0.0041	0.0060		mg/L	1	5/15/2019 11:57:33 PM	44900

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Collection Date: 5/2/2019 12:30:00 PM
Lab ID: 1905142-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Iron	16	0.44	1.0	*	mg/L	50	5/16/2019 8:09:04 PM	44900
Manganese	0.86	0.00029	0.0020	*	mg/L	1	5/15/2019 11:57:33 PM	44900
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/15/2019 11:57:33 PM	44900
Nickel	0.032	0.0040	0.010		mg/L	1	5/15/2019 11:57:33 PM	44900
Silver	ND	0.0014	0.0050		mg/L	1	5/15/2019 11:57:33 PM	44900
Zinc	0.040	0.0058	0.010		mg/L	1	5/15/2019 11:57:33 PM	44900
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:47:02 PM	C59847
Arsenic	0.0014	0.00050	0.0050	J	mg/L	5	5/13/2019 3:47:02 PM	C59847
Lead	0.00047	0.00027	0.0025	J	mg/L	5	5/13/2019 3:47:02 PM	C59847
Selenium	0.018	0.00086	0.0050		mg/L	5	5/13/2019 3:47:02 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 3:47:02 PM	C59847
Uranium	0.054	0.00037	0.0025	*	mg/L	5	5/13/2019 3:47:02 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/14/2019 4:07:33 PM	44900
Arsenic	0.0047	0.0016	0.0050	J	mg/L	5	5/14/2019 4:07:33 PM	44900
Lead	0.014	0.00027	0.0025		mg/L	5	5/14/2019 4:07:33 PM	44900
Selenium	0.017	0.0024	0.0050		mg/L	5	5/14/2019 4:07:33 PM	44900
Thallium	ND	0.00026	0.0025		mg/L	5	5/14/2019 4:07:33 PM	44900
Uranium	0.053	0.00042	0.0025	*	mg/L	5	5/14/2019 4:07:33 PM	44900
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/14/2019 1:13:12 PM	44893
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Acenaphthylene	ND	6.2	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Aniline	ND	6.2	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Anthracene	ND	5.7	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Azobenzene	ND	6.7	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Benzoic acid	ND	6.3	20		µg/L	1	5/9/2019 11:35:48 PM	44729
Benzyl alcohol	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729

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Collection Date: 5/2/2019 12:30:00 PM
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Matrix: AQUEOUS
Received Date: 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/9/2019 11:35:48 PM	44729
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Carbazole	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/9/2019 11:35:48 PM	44729
4-Chloroaniline	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2-Chlorophenol	ND	5.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Chrysene	ND	6.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Dibenzofuran	ND	6.9	10		µg/L	1	5/9/2019 11:35:48 PM	44729
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Diethyl phthalate	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/9/2019 11:35:48 PM	44729
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/9/2019 11:35:48 PM	44729
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/9/2019 11:35:48 PM	44729
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/9/2019 11:35:48 PM	44729
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Fluoranthene	ND	5.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Fluorene	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Hexachloroethane	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Isophorone	ND	6.2	10		µg/L	1	5/9/2019 11:35:48 PM	44729
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2-Methylphenol	ND	6.3	10		µg/L	1	5/9/2019 11:35:48 PM	44729
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/9/2019 11:35:48 PM	44729

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Collection Date: 5/2/2019 12:30:00 PM
Lab ID: 1905142-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/9/2019 11:35:48 PM	44729
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/9/2019 11:35:48 PM	44729
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Naphthalene	ND	5.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2-Nitroaniline	ND	5.9	10		µg/L	1	5/9/2019 11:35:48 PM	44729
3-Nitroaniline	ND	6.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
4-Nitroaniline	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Nitrobenzene	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2-Nitrophenol	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
4-Nitrophenol	ND	5.6	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Pentachlorophenol	ND	5.3	20		µg/L	1	5/9/2019 11:35:48 PM	44729
Phenanthrene	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Phenol	ND	6.0	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Pyrene	ND	6.5	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Pyridine	ND	5.4	10		µg/L	1	5/9/2019 11:35:48 PM	44729
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/9/2019 11:35:48 PM	44729
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/9/2019 11:35:48 PM	44729
Surr: 2-Fluorophenol	37.2	0	15-101		%Rec	1	5/9/2019 11:35:48 PM	44729
Surr: Phenol-d5	28.6	0	15-84.6		%Rec	1	5/9/2019 11:35:48 PM	44729
Surr: 2,4,6-Tribromophenol	46.1	0	27.8-112		%Rec	1	5/9/2019 11:35:48 PM	44729
Surr: Nitrobenzene-d5	49.4	0	33-113		%Rec	1	5/9/2019 11:35:48 PM	44729
Surr: 2-Fluorobiphenyl	40.1	0	26.6-107		%Rec	1	5/9/2019 11:35:48 PM	44729
Surr: 4-Terphenyl-d14	59.4	0	18.7-148		%Rec	1	5/9/2019 11:35:48 PM	44729
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Toluene	ND	0.35	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Methyl tert-butyl ether (MTBE)	0.58	0.46	1.0	J	µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Naphthalene	ND	0.28	2.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Acetone	9.4	1.2	10	J	µg/L	1	5/10/2019 9:04:02 PM	R5982C
Bromobenzene	ND	0.24	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromoform	ND	0.29	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Bromomethane	ND	0.27	3.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
2-Butanone	ND	2.1	10		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Carbon disulfide	ND	0.45	10		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Chloroethane	ND	0.18	2.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Chloroform	ND	0.12	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Chloromethane	ND	0.32	3.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Dibromomethane	ND	0.21	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
2-Hexanone	ND	1.5	10		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
Styrene	ND	0.19	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/10/2019 9:04:02 PM	R5982C

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 2nd QTR GW Sampling
Collection Date: 5/2/2019 12:30:00 PM
Lab ID: 1905142-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2019 9:04:02 PM	R59820
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/10/2019 9:04:02 PM	R59820
Surr: 1,2-Dichloroethane-d4	89.0	0	70-130		%Rec	1	5/10/2019 9:04:02 PM	R59820
Surr: 4-Bromofluorobenzene	98.0	0	70-130		%Rec	1	5/10/2019 9:04:02 PM	R59820
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	5/10/2019 9:04:02 PM	R59820
Surr: Toluene-d8	88.5	0	70-130		%Rec	1	5/10/2019 9:04:02 PM	R59820
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/10/2019 9:04:02 PM	G59820
Surr: BFB	112	0	70-130		%Rec	1	5/10/2019 9:04:02 PM	G59820

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011990** Units: **mg/L**

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

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.63	1.0	0.5000	0	127	50	150			J

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011997** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	104	85	115			

Sample ID: **MB-44900**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44900**	RunNo: **59865**
Prep Date: **5/13/2019**	Analysis Date: **5/14/2019**	SeqNo: **2019911** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0056	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **LLLCS-44900** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **44900** RunNo: **59865**

Prep Date: **5/13/2019** Analysis Date: **5/14/2019** SeqNo: **2019912** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.019	0.020	0.01000	0	195	50	150			JS
Barium	0.0021	0.0020	0.002000	0	104	50	150			
Beryllium	0.0023	0.0020	0.002000	0	114	50	150			
Boron	0.041	0.040	0.04000	0	102	50	150			
Cadmium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Chromium	0.0060	0.0060	0.006000	0	99.3	50	150			J
Cobalt	0.0066	0.0060	0.006000	0	110	50	150			
Copper	0.0033	0.0060	0.006000	0	55.0	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Molybdenum	0.0070	0.0080	0.008000	0	87.0	50	150			J
Nickel	0.0026	0.010	0.005000	0	52.4	50	150			J
Silver	0.0056	0.0050	0.005000	0	111	50	150			
Zinc	0.0072	0.010	0.005000	0	143	50	150			J

Sample ID: **LCS-44900** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **44900** RunNo: **59865**

Prep Date: **5/13/2019** Analysis Date: **5/14/2019** SeqNo: **2019913** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.58	0.020	0.5000	0	115	85	115			S
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Beryllium	0.51	0.0020	0.5000	0	101	85	115			
Boron	0.50	0.040	0.5000	0	101	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.2	85	115			
Nickel	0.48	0.010	0.5000	0	96.8	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.48	0.010	0.5000	0	96.7	85	115			

Sample ID: **MB-44900** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **44900** RunNo: **59908**

Prep Date: **5/13/2019** Analysis Date: **5/15/2019** SeqNo: **2021502** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-44900** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **44900** RunNo: **59908**
Prep Date: **5/13/2019** Analysis Date: **5/15/2019** SeqNo: **2021502** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0057	0.020								J

Sample ID: **LLLCS-44900** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **44900** RunNo: **59908**
Prep Date: **5/13/2019** Analysis Date: **5/15/2019** SeqNo: **2021504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.017	0.020	0.01000	0	170	50	150			JS

Sample ID: **LCS-44900** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **44900** RunNo: **59908**
Prep Date: **5/13/2019** Analysis Date: **5/15/2019** SeqNo: **2021506** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.57	0.020	0.5000	0	114	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011820** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	106	50	150			J
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	99.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Cobalt	0.0068	0.0060	0.006000	0	114	50	150			
Copper	0.0064	0.0060	0.006000	0	106	50	150			
Iron	0.023	0.020	0.02000	0	115	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.010	0.0080	0.008000	0	127	50	150			
Nickel	0.0056	0.010	0.005000	0	111	50	150			J
Potassium	0.52	1.0	0.5000	0	104	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J
Sodium	0.52	1.0	0.5000	0	105	50	150			J
Zinc	0.0050	0.010	0.005000	0	100	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011822** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Beryllium	0.50	0.0020	0.5000	0	101	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.4	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	99.7	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.6	85	115			
Molybdenum	0.50	0.0080	0.5000	0	100	85	115			
Nickel	0.49	0.010	0.5000	0	98.0	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011991** Units: **mg/L**

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

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011996** Units: **mg/L**

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

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011996** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.63	1.0	0.5000	0	127	50	150			J

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C59669**	RunNo: **59669**
Prep Date:	Analysis Date: **5/6/2019**	SeqNo: **2011998** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-44900** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **44900** RunNo: **59867**
Prep Date: **5/13/2019** Analysis Date: **5/14/2019** SeqNo: **2019653** Units: **mg/L**

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

Sample ID: **MSLLLCS-44900** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **44900** RunNo: **59867**
Prep Date: **5/13/2019** Analysis Date: **5/14/2019** SeqNo: **2019655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00095	0.0010	0.001000	0	94.9	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	99.3	50	150			J
Lead	0.00054	0.00050	0.0005000	0	108	50	150			
Selenium	0.00090	0.0010	0.001000	0	90.2	50	150			J
Thallium	0.00044	0.00050	0.0005000	0	87.8	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.9	50	150			J

Sample ID: **MSLCS-44900** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **44900** RunNo: **59867**
Prep Date: **5/13/2019** Analysis Date: **5/14/2019** SeqNo: **2019657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	102	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.2	85	115			
Lead	0.012	0.00050	0.01250	0	96.1	85	115			
Selenium	0.025	0.0010	0.02500	0	99.6	85	115			
Thallium	0.012	0.00050	0.01250	0	95.0	85	115			
Uranium	0.012	0.00050	0.01250	0	98.8	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018732** Units: **mg/L**

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

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.0	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	99.9	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.1	50	150			J
Selenium	0.0011	0.0010	0.001000	0	107	50	150			
Thallium	0.00046	0.00050	0.0005000	0	93.0	50	150			J
Uranium	0.00053	0.00050	0.0005000	0	105	50	150			

Sample ID: **1905142-003FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-54** Batch ID: **C59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018746** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.12	0.0050	0.1250	0	97.0	70	130			
Arsenic	0.13	0.0050	0.1250	0.003111	101	70	130			
Lead	0.064	0.0025	0.06250	0.005381	94.1	70	130			
Selenium	0.12	0.0050	0.1250	0	98.4	70	130			
Thallium	0.058	0.0025	0.06250	0	92.8	70	130			
Uranium	0.11	0.0025	0.06250	0.05088	101	70	130			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.2	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.4	85	115			
Lead	0.011	0.00050	0.01250	0	90.5	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C59847**	RunNo: **59847**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.012	0.00050	0.01250	0	94.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.6	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-44893**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44893**	RunNo: **59862**
Prep Date: **5/13/2019**	Analysis Date: **5/14/2019**	SeqNo: **2019378** Units: **mg/L**

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

Sample ID: **LCS-44893**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44893**	RunNo: **59862**
Prep Date: **5/13/2019**	Analysis Date: **5/14/2019**	SeqNo: **2019379** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	95.0	80	120			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59849** RunNo: **59849**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018858** Units: **mg/L**

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

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59849** RunNo: **59849**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Bromide	2.4	0.10	2.500	0	96.6	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.0	90	110			
Sulfate	9.8	0.50	10.00	0	98.1	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.3	90	110			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **A59880** RunNo: **59880**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2020376** Units: **mg/L**

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

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **A59880** RunNo: **59880**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2020377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.5	90	110			
Sulfate	9.8	0.50	10.00	0	97.8	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **MB-44732**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44732**	RunNo: **59664**
Prep Date: **5/6/2019**	Analysis Date: **5/6/2019**	SeqNo: **2011524** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-44732**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44732**	RunNo: **59664**
Prep Date: **5/6/2019**	Analysis Date: **5/6/2019**	SeqNo: **2011526** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.12	0.010	0.1000	0	119	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **LCS-44702**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**							
Client ID: **LCSW**	Batch ID: **44702**	RunNo: **59607**							
Prep Date: **5/3/2019**	Analysis Date: **5/3/2019**	SeqNo: **2009038**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	71.8	135			
Surr: DNOP	0.52		0.5000		104	70	130			

Sample ID: **MB-44702**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**							
Client ID: **PBW**	Batch ID: **44702**	RunNo: **59607**							
Prep Date: **5/3/2019**	Analysis Date: **5/3/2019**	SeqNo: **2009039**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		108	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R59820**	RunNo: **59820**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017637** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.9	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	95.6	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.6	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.5	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	8.8		10.00		88.0	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59820**	RunNo: **59820**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017652** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	0.38	3.0								J
2-Chlorotoluene	ND	1.0								

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59820**	RunNo: **59820**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017652** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59820**	RunNo: **59820**
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017652** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.0	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.1	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.0		10.00		90.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **mb-44729** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44729** RunNo: **59772**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015703** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **mb-44729**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44729**	RunNo: **59772**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015703** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		61.6	15	101			
Surr: Phenol-d5	90		200.0		44.8	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		72.6	27.8	112			
Surr: Nitrobenzene-d5	79		100.0		78.9	33	113			
Surr: 2-Fluorobiphenyl	59		100.0		58.8	26.6	107			
Surr: 4-Terphenyl-d14	73		100.0		73.2	18.7	148			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**

22-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Sampling

Sample ID: **lcs-44729**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44729**	RunNo: **59772**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015704** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	46	10	100.0	0	46.5	32.2	94			
4-Chloro-3-methylphenol	120	10	200.0	0	59.3	37.7	101			
2-Chlorophenol	120	10	200.0	0	59.8	32.6	90.1			
1,4-Dichlorobenzene	34	10	100.0	0	34.3	30	87.2			
2,4-Dinitrotoluene	47	10	100.0	0	46.7	35.9	85.8			
N-Nitrosodi-n-propylamine	61	10	100.0	0	61.3	37.1	108			
4-Nitrophenol	61	10	200.0	0	30.7	22.4	86.6			
Pentachlorophenol	75	20	200.0	0	37.7	31.6	91			
Phenol	70	10	200.0	0	35.2	21.7	84.9			
Pyrene	54	10	100.0	0	53.5	46.3	103			
1,2,4-Trichlorobenzene	40	10	100.0	0	40.0	30.2	88.3			
Surr: 2-Fluorophenol	93		200.0		46.4	15	101			
Surr: Phenol-d5	67		200.0		33.3	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		60.5	27.8	112			
Surr: Nitrobenzene-d5	58		100.0		57.7	33	113			
Surr: 2-Fluorobiphenyl	42		100.0		42.4	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		62.7	18.7	148			

Sample ID: **1905142-005CMS**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-55**	Batch ID: **44729**	RunNo: **59772**
Prep Date: **5/6/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.1	30	94			
4-Chloro-3-methylphenol	150	10	200.0	0	75.0	30.9	101			
2-Chlorophenol	130	10	200.0	0	63.8	15.8	96.2			
1,4-Dichlorobenzene	40	10	100.0	0	39.8	25.6	87.2			
2,4-Dinitrotoluene	63	10	100.0	0	63.2	29.5	85.8			
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.4	28.6	108			
4-Nitrophenol	67	10	200.0	0	33.7	15	59.7			
Pentachlorophenol	110	20	200.0	0	55.3	21.1	99.4			
Phenol	100	10	200.0	34.50	35.0	15	61.9			
Pyrene	70	10	100.0	0	69.5	37.5	105			
1,2,4-Trichlorobenzene	44	10	100.0	0	43.6	17.1	98.7			
Surr: 2-Fluorophenol	84		200.0		41.9	15	101			
Surr: Phenol-d5	68		200.0		33.8	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		73.4	27.8	112			
Surr: Nitrobenzene-d5	65		100.0		64.6	33	113			
Surr: 2-Fluorobiphenyl	58		100.0		58.5	26.6	107			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **1905142-005CMS** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-55** Batch ID: **44729** RunNo: **59772**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	76		100.0		75.7	18.7	148			

Sample ID: **1905142-005CMSD** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-55** Batch ID: **44729** RunNo: **59772**
Prep Date: **5/6/2019** Analysis Date: **5/9/2019** SeqNo: **2015715** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	64.6	30	94	2.44	47.7	
4-Chloro-3-methylphenol	140	10	200.0	0	68.8	30.9	101	8.66	54.7	
2-Chlorophenol	120	10	200.0	0	59.6	15.8	96.2	6.65	40.9	
1,4-Dichlorobenzene	37	10	100.0	0	37.2	25.6	87.2	6.80	46.8	
2,4-Dinitrotoluene	70	10	100.0	0	69.9	29.5	85.8	10.0	49.8	
N-Nitrosodi-n-propylamine	71	10	100.0	0	71.0	28.6	108	2.31	45.2	
4-Nitrophenol	83	10	200.0	0	41.7	15	59.7	21.2	82.1	
Pentachlorophenol	140	20	200.0	0	71.6	21.1	99.4	25.7	52	
Phenol	65	10	200.0	34.50	15.5	15	61.9	46.0	61.9	
Pyrene	72	10	100.0	0	72.5	37.5	105	4.14	39.9	
1,2,4-Trichlorobenzene	41	10	100.0	0	41.5	17.1	98.7	4.89	47.5	
Surr: 2-Fluorophenol	61		200.0		30.4	15	101	0	0	
Surr: Phenol-d5	42		200.0		20.8	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		82.2	27.8	112	0	0	
Surr: Nitrobenzene-d5	63		100.0		63.5	33	113	0	0	
Surr: 2-Fluorobiphenyl	62		100.0		62.0	26.6	107	0	0	
Surr: 4-Terphenyl-d14	75		100.0		75.4	18.7	148	0	0	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905142**
22-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Sampling

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSW**	Batch ID: **G59820**	RunNo: **59820**							
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017873**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.0	70	130			
Surr: BFB	11		10.00		110	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBW**	Batch ID: **G59820**	RunNo: **59820**							
Prep Date:	Analysis Date: **5/10/2019**	SeqNo: **2017874**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		108	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905142** RcptNo: **1**

Received By: **Isaiah Ortiz** **5/2/2019 4:03:00 PM** I-OX

Completed By: **Isaiah Ortiz** **5/3/2019 7:23:49 AM** I-OX

Reviewed By: YG 5/3/19

CB: JD 5/3/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ 5/3/19 JD No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 14 (<2 or >12 unless noted)

Adjusted? no

Checked by: JC 5-3-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			
2	4.8	Good	Yes			
3	5.2	Good	Yes			
4	5.6	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2019 2nd QTR GW SAMPLING

Project #:

OW WELLS

Project Manager:

BRIAN MOORE

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: ☒ Yes ☐ No

Sample Temperature: 4, Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905170 42	8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Air Bubbles (Y or N)
5/2/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X								
5/2/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X								
5/2/2019	848	AQUEOUS	OW-54	MISC	MISC	-003	X	X	X	X	X	X	X		
5/2/2019	852	AQUEOUS	DUPLICATE	MISC	MISC	-004	X	X	X	X	X	X	X		
5/2/2019	944	AQUEOUS	OW-55	MISC	MISC	-005	X	X	2	X	X	X	X		
5/2/2019	1210	AQUEOUS	OW-56	MISC	MISC	-006	X	X	X	X	X	X	X		
5/2/2019	1108	AQUEOUS	OW-59	MISC	MISC	-007	X	X	X	X	X	X			
5/2/2019	1230	AQUEOUS	OW-60	MISC	MISC	-008	X	X	X	X	X	X			

Date: 5/2/19 Time: 1340 Relinquished by: Received by: Date 5/2/19 Time 1345

Date: 5/2/19 Time: 1603 Relinquished by: Received by: COO Date 5/2/19 Time 1603

Remarks: 1 C1.3° 2 4.8° 3 5.2° 4 5.6°

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 30, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 2nd QTR MKTF WELLS OrderNo.: 1905360

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 12 sample(s) on 5/7/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 7:00:00 AM
Lab ID: 1905360-001 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Naphthalene	0.31	0.28	2.0	J	µg/L	1	5/13/2019 3:39:25 PM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Acetone	ND	1.2	10		µg/L	1	5/13/2019 3:39:25 PM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/13/2019 3:39:25 PM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/13/2019 3:39:25 PM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Chloroform	ND	0.12	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/13/2019 3:39:25 PM	R59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 7:00:00 AM
Lab ID: 1905360-001 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/13/2019 3:39:25 PM	R59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/13/2019 3:39:25 PM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Styrene	ND	0.19	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/13/2019 3:39:25 PM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/13/2019 3:39:25 PM	R59856
Surr: 1,2-Dichloroethane-d4	83.3	0	70-130		%Rec	1	5/13/2019 3:39:25 PM	R59856
Surr: 4-Bromofluorobenzene	92.7	0	70-130		%Rec	1	5/13/2019 3:39:25 PM	R59856
Surr: Dibromofluoromethane	95.3	0	70-130		%Rec	1	5/13/2019 3:39:25 PM	R59856
Surr: Toluene-d8	88.9	0	70-130		%Rec	1	5/13/2019 3:39:25 PM	R59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 7:00:00 AM
Lab ID: 1905360-002
Matrix: TRIP BLANK
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Acetone	4.4	1.2	10	J	µg/L	1	5/13/2019 4:08:06 PM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/13/2019 4:08:06 PM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/13/2019 4:08:06 PM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Chloroform	ND	0.12	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/13/2019 4:08:06 PM	R59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 7:00:00 AM
Lab ID: 1905360-002
Matrix: TRIP BLANK
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/13/2019 4:08:06 PM	R59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/13/2019 4:08:06 PM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Styrene	ND	0.19	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/13/2019 4:08:06 PM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/13/2019 4:08:06 PM	R59856
Surr: 1,2-Dichloroethane-d4	85.4	0	70-130		%Rec	1	5/13/2019 4:08:06 PM	R59856
Surr: 4-Bromofluorobenzene	87.8	0	70-130		%Rec	1	5/13/2019 4:08:06 PM	R59856
Surr: Dibromofluoromethane	91.9	0	70-130		%Rec	1	5/13/2019 4:08:06 PM	R59856
Surr: Toluene-d8	89.1	0	70-130		%Rec	1	5/13/2019 4:08:06 PM	R59856

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:10:00 AM
Lab ID: 1905360-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0096		µg/L	1	5/13/2019 8:37:30 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 3:59:41 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 3:59:41 PM	44776
Surr: DNOP	101	0	70-130		%Rec	1	5/9/2019 3:59:41 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.2	0.25	0.50		mg/L	5	5/8/2019 1:35:16 AM	R59714
Chloride	410	3.1	25		mg/L	50	5/17/2019 10:03:14 PM	A59981
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 1:35:16 AM	R59714
Bromide	0.80	0.089	0.50		mg/L	5	5/8/2019 1:35:16 AM	R59714
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/8/2019 1:35:16 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 1:35:16 AM	R59714
Sulfate	540	1.1	10		mg/L	20	5/8/2019 1:47:40 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.019	0.0025	0.020	J	mg/L	1	5/23/2019 12:59:15 PM	A60136
Barium	0.020	0.00065	0.0020		mg/L	1	5/23/2019 12:59:15 PM	A60136
Beryllium	0.0011	0.00028	0.0020	J	mg/L	1	5/20/2019 11:14:18 PM	F60012
Boron	0.59	0.0045	0.040		mg/L	1	5/20/2019 11:14:18 PM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/20/2019 11:14:18 PM	F60012
Calcium	64	0.062	1.0		mg/L	1	5/23/2019 12:59:15 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 11:14:18 PM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 11:14:18 PM	F60012
Copper	ND	0.0013	0.0060		mg/L	1	5/20/2019 11:14:18 PM	F60012
Iron	0.012	0.0087	0.020	J	mg/L	1	5/20/2019 11:14:18 PM	F60012
Magnesium	12	0.050	1.0		mg/L	1	5/23/2019 12:59:15 PM	A60136
Manganese	0.0099	0.00029	0.0020		mg/L	1	5/20/2019 11:14:18 PM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 11:14:18 PM	F60012
Nickel	0.014	0.0040	0.010		mg/L	1	5/23/2019 12:59:15 PM	A60136
Potassium	0.16	0.16	1.0	J	mg/L	1	5/20/2019 11:14:18 PM	F60012
Silver	0.0029	0.00094	0.0050	J	mg/L	1	5/20/2019 11:14:18 PM	F60012
Sodium	730	4.2	10		mg/L	10	5/23/2019 1:01:21 PM	A60136
Zinc	0.026	0.0023	0.010		mg/L	1	5/23/2019 12:59:15 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	12	0.050	0.40	*	mg/L	20	5/22/2019 6:42:23 PM	44984
Barium	0.16	0.00065	0.0020		mg/L	1	5/20/2019 9:59:55 PM	44984
Beryllium	0.0013	0.00028	0.0020	J	mg/L	1	5/20/2019 9:59:55 PM	44984
Boron	0.58	0.0045	0.040		mg/L	1	5/20/2019 9:59:55 PM	44984

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:10:00 AM
Lab ID: 1905360-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:59:55 PM	44984
Chromium	0.0046	0.0015	0.0060	J	mg/L	1	5/20/2019 9:59:55 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:59:55 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 9:59:55 PM	44984
Iron	5.3	0.17	0.40	*	mg/L	20	5/22/2019 6:42:23 PM	44984
Manganese	0.21	0.00029	0.0020	*	mg/L	1	5/20/2019 9:59:55 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:59:55 PM	44984
Nickel	0.022	0.0040	0.010		mg/L	1	5/20/2019 9:59:55 PM	44984
Silver	0.0019	0.0014	0.0050	J	mg/L	1	5/20/2019 9:59:55 PM	44984
Zinc	0.013	0.0058	0.010		mg/L	1	5/22/2019 6:40:23 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 3:42:54 PM	C59904
Arsenic	0.00056	0.00050	0.0050	J	mg/L	5	5/15/2019 3:42:54 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 3:42:54 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 3:42:54 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 3:42:54 PM	C59904
Uranium	0.035	0.00037	0.0025	*	mg/L	5	5/15/2019 3:42:54 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:22:58 PM	44984
Arsenic	ND	0.0016	0.0050		mg/L	5	5/20/2019 5:22:58 PM	44984
Lead	0.0042	0.000055	0.00050		mg/L	1	5/20/2019 3:35:20 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:22:58 PM	44984
Thallium	ND	0.000052	0.00050		mg/L	1	5/20/2019 3:35:20 PM	44984
Uranium	0.034	0.00042	0.0025	*	mg/L	5	5/20/2019 5:22:58 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:00:26 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 10:40:21 AM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:10:00 AM
Lab ID: 1905360-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 10:40:21 AM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 10:40:21 AM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 10:40:21 AM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 10:40:21 AM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 10:40:21 AM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 10:40:21 AM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 10:40:21 AM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 10:40:21 AM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 10:40:21 AM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 10:40:21 AM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:10:00 AM
Lab ID: 1905360-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 10:40:21 AM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 10:40:21 AM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 10:40:21 AM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 10:40:21 AM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 10:40:21 AM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 10:40:21 AM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 10:40:21 AM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 10:40:21 AM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 10:40:21 AM	44850
Surr: 2-Fluorophenol	47.6	0	15-101		%Rec	1	5/14/2019 10:40:21 AM	44850
Surr: Phenol-d5	36.7	0	15-84.6		%Rec	1	5/14/2019 10:40:21 AM	44850
Surr: 2,4,6-Tribromophenol	67.2	0	27.8-112		%Rec	1	5/14/2019 10:40:21 AM	44850
Surr: Nitrobenzene-d5	73.9	0	33-113		%Rec	1	5/14/2019 10:40:21 AM	44850
Surr: 2-Fluorobiphenyl	65.1	0	26.6-107		%Rec	1	5/14/2019 10:40:21 AM	44850
Surr: 4-Terphenyl-d14	75.3	0	18.7-148		%Rec	1	5/14/2019 10:40:21 AM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Methyl tert-butyl ether (MTBE)	1.8	0.46	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2-Dichloroethane (EDC)	1.2	0.19	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/13/2019 4:36:46 PM	R59856

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:10:00 AM
Lab ID: 1905360-003 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Acetone	5.5	1.2	10	J	µg/L	1	5/13/2019 4:36:46 PM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/13/2019 4:36:46 PM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/13/2019 4:36:46 PM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Chloroform	ND	0.12	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
cis-1,2-DCE	2.8	0.19	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,1-Dichloroethane	36	0.14	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,1-Dichloroethene	2.5	0.21	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/13/2019 4:36:46 PM	R59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/13/2019 4:36:46 PM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:10:00 AM
Lab ID: 1905360-003 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,1,2-Trichloroethane	0.23	0.22	1.0	J	µg/L	1	5/13/2019 4:36:46 PM	R59856
Trichloroethene (TCE)	2.1	0.17	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/13/2019 4:36:46 PM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/13/2019 4:36:46 PM	R59856
Surr: 1,2-Dichloroethane-d4	87.8	0	70-130		%Rec	1	5/13/2019 4:36:46 PM	R59856
Surr: 4-Bromofluorobenzene	91.7	0	70-130		%Rec	1	5/13/2019 4:36:46 PM	R59856
Surr: Dibromofluoromethane	94.8	0	70-130		%Rec	1	5/13/2019 4:36:46 PM	R59856
Surr: Toluene-d8	89.9	0	70-130		%Rec	1	5/13/2019 4:36:46 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.043	0.031	0.050	J	mg/L	1	5/13/2019 4:36:46 PM	G59856
Surr: BFB	98.1	0	70-130		%Rec	1	5/13/2019 4:36:46 PM	G59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:55:00 AM
Lab ID: 1905360-004
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0034	0.0097		µg/L	1	5/13/2019 8:52:42 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.36	0.35	1.0	J	mg/L	1	5/9/2019 4:24:04 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 4:24:04 PM	44776
Surr: DNOP	108	0	70-130		%Rec	1	5/9/2019 4:24:04 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.76	0.25	0.50		mg/L	5	5/8/2019 2:00:05 AM	R59714
Chloride	260	1.2	10		mg/L	20	5/8/2019 2:12:29 AM	R59714
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 2:00:05 AM	R59714
Bromide	0.75	0.089	0.50		mg/L	5	5/8/2019 2:00:05 AM	R59714
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/8/2019 2:00:05 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 2:00:05 AM	R59714
Sulfate	540	1.1	10		mg/L	20	5/8/2019 2:12:29 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0091	0.0025	0.020	J	mg/L	1	5/20/2019 11:30:42 PM	F60012
Barium	0.025	0.00065	0.0020		mg/L	1	5/23/2019 1:03:33 PM	A60136
Beryllium	0.00089	0.00028	0.0020	J	mg/L	1	5/20/2019 11:30:42 PM	F60012
Boron	0.61	0.0045	0.040		mg/L	1	5/20/2019 11:30:42 PM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/20/2019 11:30:42 PM	F60012
Calcium	78	0.062	1.0		mg/L	1	5/23/2019 1:03:33 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 11:30:42 PM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 11:30:42 PM	F60012
Copper	ND	0.0013	0.0060		mg/L	1	5/20/2019 11:30:42 PM	F60012
Iron	0.016	0.0087	0.020	J	mg/L	1	5/20/2019 11:30:42 PM	F60012
Magnesium	11	0.050	1.0		mg/L	1	5/23/2019 1:03:33 PM	A60136
Manganese	0.66	0.00029	0.0020	*	mg/L	1	5/20/2019 11:30:42 PM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 11:30:42 PM	F60012
Nickel	0.0078	0.0040	0.010	J	mg/L	1	5/20/2019 11:30:42 PM	F60012
Potassium	0.26	0.16	1.0	J	mg/L	1	5/20/2019 11:30:42 PM	F60012
Silver	0.0028	0.00094	0.0050	J	mg/L	1	5/20/2019 11:30:42 PM	F60012
Sodium	530	4.2	10		mg/L	10	5/23/2019 1:11:57 PM	A60136
Zinc	0.039	0.0023	0.010		mg/L	1	5/23/2019 1:03:33 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.2	0.012	0.10	*	mg/L	5	5/22/2019 6:44:41 PM	44984
Barium	0.073	0.00065	0.0020		mg/L	1	5/20/2019 10:03:48 PM	44984
Beryllium	0.00097	0.00028	0.0020	J	mg/L	1	5/20/2019 10:03:48 PM	44984
Boron	0.62	0.0045	0.040		mg/L	1	5/20/2019 10:03:48 PM	44984

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:55:00 AM
Lab ID: 1905360-004
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 10:03:48 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 10:03:48 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 10:03:48 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 10:03:48 PM	44984
Iron	1.2	0.044	0.10	*	mg/L	5	5/20/2019 10:05:49 PM	44984
Manganese	0.71	0.00029	0.0020	*	mg/L	1	5/20/2019 10:03:48 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 10:03:48 PM	44984
Nickel	0.0076	0.0040	0.010	J	mg/L	1	5/20/2019 10:03:48 PM	44984
Silver	0.0031	0.0014	0.0050	J	mg/L	1	5/20/2019 10:03:48 PM	44984
Zinc	0.0086	0.0058	0.010	J	mg/L	1	5/20/2019 10:03:48 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 3:45:36 PM	C59904
Arsenic	0.0011	0.00050	0.0050	J	mg/L	5	5/15/2019 3:45:36 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 3:45:36 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 3:45:36 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 3:45:36 PM	C59904
Uranium	0.0085	0.00037	0.0025		mg/L	5	5/15/2019 3:45:36 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:29:33 PM	44984
Arsenic	ND	0.0016	0.0050		mg/L	5	5/20/2019 5:29:33 PM	44984
Lead	0.00082	0.000055	0.00050		mg/L	1	5/20/2019 3:41:52 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:29:33 PM	44984
Thallium	0.000053	0.000052	0.00050	J	mg/L	1	5/20/2019 3:41:52 PM	44984
Uranium	0.0091	0.000085	0.00050		mg/L	1	5/20/2019 3:41:52 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:11:59 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 11:09:54 AM	44850

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:55:00 AM
Lab ID: 1905360-004
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 11:09:54 AM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 11:09:54 AM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 11:09:54 AM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 11:09:54 AM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 11:09:54 AM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 11:09:54 AM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 11:09:54 AM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 11:09:54 AM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 11:09:54 AM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 11:09:54 AM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:55:00 AM
Lab ID: 1905360-004
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 11:09:54 AM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 11:09:54 AM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 11:09:54 AM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 11:09:54 AM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 11:09:54 AM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 11:09:54 AM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 11:09:54 AM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 11:09:54 AM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 11:09:54 AM	44850
Surr: 2-Fluorophenol	50.9	0	15-101		%Rec	1	5/14/2019 11:09:54 AM	44850
Surr: Phenol-d5	40.6	0	15-84.6		%Rec	1	5/14/2019 11:09:54 AM	44850
Surr: 2,4,6-Tribromophenol	74.6	0	27.8-112		%Rec	1	5/14/2019 11:09:54 AM	44850
Surr: Nitrobenzene-d5	78.4	0	33-113		%Rec	1	5/14/2019 11:09:54 AM	44850
Surr: 2-Fluorobiphenyl	71.0	0	26.6-107		%Rec	1	5/14/2019 11:09:54 AM	44850
Surr: 4-Terphenyl-d14	80.5	0	18.7-148		%Rec	1	5/14/2019 11:09:54 AM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Methyl tert-butyl ether (MTBE)	4.8	0.46	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/13/2019 6:31:22 PM	R59856

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CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:55:00 AM
Lab ID: 1905360-004 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Acetone	5.6	1.2	10	J	µg/L	1	5/13/2019 6:31:22 PM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/13/2019 6:31:22 PM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/13/2019 6:31:22 PM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Chloroform	ND	0.12	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/13/2019 6:31:22 PM	R59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/13/2019 6:31:22 PM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 9:55:00 AM
Lab ID: 1905360-004
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/13/2019 6:31:22 PM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/13/2019 6:31:22 PM	R59856
Surr: 1,2-Dichloroethane-d4	85.6	0	70-130		%Rec	1	5/13/2019 6:31:22 PM	R59856
Surr: 4-Bromofluorobenzene	90.3	0	70-130		%Rec	1	5/13/2019 6:31:22 PM	R59856
Surr: Dibromofluoromethane	94.3	0	70-130		%Rec	1	5/13/2019 6:31:22 PM	R59856
Surr: Toluene-d8	88.1	0	70-130		%Rec	1	5/13/2019 6:31:22 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/13/2019 6:31:22 PM	G59856
Surr: BFB	93.6	0	70-130		%Rec	1	5/13/2019 6:31:22 PM	G59856

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 10:40:00 AM
Lab ID: 1905360-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 4:48:21 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 4:48:21 PM	44776
Surr: DNOP	105	0	70-130		%Rec	1	5/9/2019 4:48:21 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.2	0.25	0.50		mg/L	5	5/8/2019 2:24:53 AM	R59714
Chloride	470	3.1	25		mg/L	50	5/17/2019 12:21:23 AM	R59924
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 2:24:53 AM	R59714
Bromide	2.0	0.089	0.50		mg/L	5	5/8/2019 2:24:53 AM	R59714
Nitrogen, Nitrate (As N)	1.1	0.027	0.50		mg/L	5	5/8/2019 2:24:53 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 2:24:53 AM	R59714
Sulfate	200	0.27	2.5		mg/L	5	5/8/2019 2:24:53 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.049	0.0025	0.020		mg/L	1	5/23/2019 1:14:11 PM	A60136
Barium	0.043	0.00065	0.0020		mg/L	1	5/23/2019 1:14:11 PM	A60136
Beryllium	0.00062	0.00028	0.0020	J	mg/L	1	5/20/2019 11:35:01 PM	F60012
Boron	1.6	0.023	0.20		mg/L	5	5/20/2019 11:37:11 PM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/20/2019 11:35:01 PM	F60012
Calcium	43	0.062	1.0		mg/L	1	5/23/2019 1:14:11 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 11:35:01 PM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 11:35:01 PM	F60012
Copper	ND	0.0013	0.0060		mg/L	1	5/20/2019 11:35:01 PM	F60012
Iron	0.029	0.0087	0.020		mg/L	1	5/20/2019 11:35:01 PM	F60012
Magnesium	8.4	0.050	1.0		mg/L	1	5/23/2019 1:14:11 PM	A60136
Manganese	0.0040	0.00029	0.0020		mg/L	1	5/20/2019 11:35:01 PM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 11:35:01 PM	F60012
Nickel	ND	0.0040	0.010		mg/L	1	5/20/2019 11:35:01 PM	F60012
Potassium	1.7	0.16	1.0		mg/L	1	5/20/2019 11:35:01 PM	F60012
Silver	0.0020	0.00094	0.0050	J	mg/L	1	5/20/2019 11:35:01 PM	F60012
Sodium	580	4.2	10		mg/L	10	5/23/2019 1:16:19 PM	A60136
Zinc	0.025	0.0023	0.010		mg/L	1	5/23/2019 1:14:11 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	4.7	0.025	0.20	*	mg/L	10	5/22/2019 6:49:00 PM	44984
Barium	0.10	0.00065	0.0020		mg/L	1	5/20/2019 9:11:59 PM	44984
Beryllium	0.00096	0.00028	0.0020	J	mg/L	1	5/20/2019 9:11:59 PM	44984
Boron	1.6	0.023	0.20		mg/L	5	5/20/2019 9:13:57 PM	44984
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:11:59 PM	44984
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	5/20/2019 9:11:59 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:11:59 PM	44984

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 10:40:00 AM
Lab ID: 1905360-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	0.0060	0.0041	0.0060	J	mg/L	1	5/20/2019 9:11:59 PM	44984
Iron	3.9	0.044	0.10	*	mg/L	5	5/20/2019 9:13:57 PM	44984
Manganese	0.26	0.00029	0.0020	*	mg/L	1	5/20/2019 9:11:59 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:11:59 PM	44984
Nickel	0.0058	0.0040	0.010	J	mg/L	1	5/20/2019 9:11:59 PM	44984
Silver	ND	0.0014	0.0050		mg/L	1	5/20/2019 9:11:59 PM	44984
Zinc	0.018	0.0058	0.010		mg/L	1	5/20/2019 9:11:59 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 3:48:19 PM	C59904
Arsenic	0.0013	0.00050	0.0050	J	mg/L	5	5/15/2019 3:48:19 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 3:48:19 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 3:48:19 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 3:48:19 PM	C59904
Uranium	0.14	0.00075	0.0050	*	mg/L	10	5/23/2019 10:12:29 PM	C60134
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0039	0.010		mg/L	10	5/20/2019 5:38:22 PM	44984
Arsenic	ND	0.0031	0.010		mg/L	10	5/20/2019 5:38:22 PM	44984
Lead	0.0043	0.000055	0.00050		mg/L	1	5/20/2019 3:57:15 PM	44984
Selenium	ND	0.0048	0.010		mg/L	10	5/20/2019 5:38:22 PM	44984
Thallium	0.000074	0.000052	0.00050	J	mg/L	1	5/20/2019 3:57:15 PM	44984
Uranium	0.14	0.00085	0.0050	*	mg/L	10	5/20/2019 5:38:22 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000049	0.000038	0.00020	J	mg/L	1	5/16/2019 2:14:12 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 11:39:21 AM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 11:39:21 AM	44850

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 10:40:00 AM
Lab ID: 1905360-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 11:39:21 AM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 11:39:21 AM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 11:39:21 AM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 11:39:21 AM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 11:39:21 AM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 11:39:21 AM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 11:39:21 AM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 11:39:21 AM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 11:39:21 AM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 11:39:21 AM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 10:40:00 AM
Lab ID: 1905360-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 11:39:21 AM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 11:39:21 AM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 11:39:21 AM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 11:39:21 AM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 11:39:21 AM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 11:39:21 AM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 11:39:21 AM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 11:39:21 AM	44850
Surr: 2-Fluorophenol	45.8	0	15-101		%Rec	1	5/14/2019 11:39:21 AM	44850
Surr: Phenol-d5	35.5	0	15-84.6		%Rec	1	5/14/2019 11:39:21 AM	44850
Surr: 2,4,6-Tribromophenol	67.6	0	27.8-112		%Rec	1	5/14/2019 11:39:21 AM	44850
Surr: Nitrobenzene-d5	66.0	0	33-113		%Rec	1	5/14/2019 11:39:21 AM	44850
Surr: 2-Fluorobiphenyl	66.0	0	26.6-107		%Rec	1	5/14/2019 11:39:21 AM	44850
Surr: 4-Terphenyl-d14	74.5	0	18.7-148		%Rec	1	5/14/2019 11:39:21 AM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Methyl tert-butyl ether (MTBE)	0.74	0.46	1.0	J	µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Acetone	5.9	1.2	10	J	µg/L	1	5/13/2019 7:57:17 PM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 10:40:00 AM
Lab ID: 1905360-005 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/13/2019 7:57:17 PM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/13/2019 7:57:17 PM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Chloroform	ND	0.12	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/13/2019 7:57:17 PM	R59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/13/2019 7:57:17 PM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Styrene	ND	0.19	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 10:40:00 AM
Lab ID: 1905360-005 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/13/2019 7:57:17 PM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/13/2019 7:57:17 PM	R59856
Surr: 1,2-Dichloroethane-d4	89.0	0	70-130		%Rec	1	5/13/2019 7:57:17 PM	R59856
Surr: 4-Bromofluorobenzene	91.2	0	70-130		%Rec	1	5/13/2019 7:57:17 PM	R59856
Surr: Dibromofluoromethane	95.2	0	70-130		%Rec	1	5/13/2019 7:57:17 PM	R59856
Surr: Toluene-d8	90.9	0	70-130		%Rec	1	5/13/2019 7:57:17 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/13/2019 7:57:17 PM	G59856
Surr: BFB	99.6	0	70-130		%Rec	1	5/13/2019 7:57:17 PM	G59856

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:06:00 AM
Lab ID: 1905360-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	5/13/2019 9:08:02 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 5:12:49 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 5:12:49 PM	44776
Surr: DNOP	113	0	70-130		%Rec	1	5/9/2019 5:12:49 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.63	0.25	0.50		mg/L	5	5/8/2019 3:14:30 AM	R59714
Chloride	4000	31	250		mg/L	500	5/17/2019 12:33:47 AM	R59924
Nitrogen, Nitrite (As N)	ND	0.090	2.0		mg/L	20	5/8/2019 3:26:55 AM	R59714
Bromide	0.85	0.089	0.50		mg/L	5	5/8/2019 3:14:30 AM	R59714
Nitrogen, Nitrate (As N)	5.5	0.027	0.50		mg/L	5	5/8/2019 3:14:30 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 3:14:30 AM	R59714
Sulfate	980	1.1	10		mg/L	20	5/8/2019 3:26:55 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0062	0.0025	0.020	J	mg/L	1	5/20/2019 11:39:14 PM	F60012
Barium	0.040	0.00065	0.0020		mg/L	1	5/23/2019 1:18:30 PM	A60136
Beryllium	0.0011	0.00028	0.0020	J	mg/L	1	5/20/2019 11:39:14 PM	F60012
Boron	0.40	0.0045	0.040		mg/L	1	5/20/2019 11:39:14 PM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/20/2019 11:39:14 PM	F60012
Calcium	400	0.31	5.0		mg/L	5	5/23/2019 1:20:37 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 11:39:14 PM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 11:39:14 PM	F60012
Copper	0.0095	0.0013	0.0060		mg/L	1	5/20/2019 11:39:14 PM	F60012
Iron	0.023	0.0087	0.020		mg/L	1	5/20/2019 11:39:14 PM	F60012
Magnesium	69	0.050	1.0		mg/L	1	5/23/2019 1:18:30 PM	A60136
Manganese	0.17	0.00029	0.0020	*	mg/L	1	5/20/2019 11:39:14 PM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 11:39:14 PM	F60012
Nickel	0.024	0.0040	0.010		mg/L	1	5/23/2019 1:18:30 PM	A60136
Potassium	12	0.16	1.0		mg/L	1	5/20/2019 11:39:14 PM	F60012
Silver	0.0093	0.00094	0.0050		mg/L	1	5/20/2019 11:39:14 PM	F60012
Sodium	2400	21	50		mg/L	50	5/23/2019 1:22:56 PM	A60136
Zinc	0.043	0.0023	0.010		mg/L	1	5/23/2019 1:18:30 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	4.2	0.012	0.10	*	mg/L	5	5/22/2019 6:51:06 PM	44984
Barium	0.086	0.00065	0.0020		mg/L	1	5/20/2019 9:15:50 PM	44984
Beryllium	0.0012	0.00028	0.0020	J	mg/L	1	5/20/2019 9:15:50 PM	44984
Boron	0.40	0.0045	0.040		mg/L	1	5/20/2019 9:15:50 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:06:00 AM
Lab ID: 1905360-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:15:50 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 9:15:50 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:15:50 PM	44984
Copper	0.013	0.0041	0.0060		mg/L	1	5/20/2019 9:15:50 PM	44984
Iron	2.2	0.044	0.10	*	mg/L	5	5/20/2019 9:24:29 PM	44984
Manganese	0.70	0.00029	0.0020	*	mg/L	1	5/20/2019 9:15:50 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:15:50 PM	44984
Nickel	0.031	0.0040	0.010		mg/L	1	5/20/2019 9:15:50 PM	44984
Silver	0.0092	0.0014	0.0050		mg/L	1	5/20/2019 9:15:50 PM	44984
Zinc	0.011	0.0058	0.010		mg/L	1	5/20/2019 9:15:50 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 3:51:01 PM	C59904
Arsenic	0.0011	0.00050	0.0050	J	mg/L	5	5/15/2019 3:51:01 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 3:51:01 PM	C59904
Selenium	0.0044	0.00086	0.0050	J	mg/L	5	5/15/2019 3:51:01 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 3:51:01 PM	C59904
Uranium	0.031	0.00037	0.0025	*	mg/L	5	5/15/2019 3:51:01 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:40:34 PM	44984
Arsenic	ND	0.0016	0.0050		mg/L	5	5/20/2019 5:40:34 PM	44984
Lead	0.0019	0.00027	0.0025	J	mg/L	5	5/20/2019 5:40:34 PM	44984
Selenium	0.0041	0.0024	0.0050	J	mg/L	5	5/20/2019 5:40:34 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:40:34 PM	44984
Uranium	0.030	0.00042	0.0025		mg/L	5	5/20/2019 5:40:34 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000050	0.000038	0.00020	J	mg/L	1	5/16/2019 2:16:26 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 12:08:52 PM	44850

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Qualifiers:

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:06:00 AM
Lab ID: 1905360-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 12:08:52 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 12:08:52 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 12:08:52 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 12:08:52 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 12:08:52 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 12:08:52 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 12:08:52 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 12:08:52 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 12:08:52 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 12:08:52 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:06:00 AM
Lab ID: 1905360-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 12:08:52 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 12:08:52 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 12:08:52 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 12:08:52 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 12:08:52 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 12:08:52 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 12:08:52 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 12:08:52 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 12:08:52 PM	44850
Surr: 2-Fluorophenol	14.6	0	15-101	S	%Rec	1	5/14/2019 12:08:52 PM	44850
Surr: Phenol-d5	26.1	0	15-84.6		%Rec	1	5/14/2019 12:08:52 PM	44850
Surr: 2,4,6-Tribromophenol	18.4	0	27.8-112	S	%Rec	1	5/14/2019 12:08:52 PM	44850
Surr: Nitrobenzene-d5	53.1	0	33-113		%Rec	1	5/14/2019 12:08:52 PM	44850
Surr: 2-Fluorobiphenyl	49.1	0	26.6-107		%Rec	1	5/14/2019 12:08:52 PM	44850
Surr: 4-Terphenyl-d14	71.0	0	18.7-148		%Rec	1	5/14/2019 12:08:52 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Methyl tert-butyl ether (MTBE)	19	0.46	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2-Dichloroethane (EDC)	0.33	0.19	1.0	J	µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/13/2019 8:25:58 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:06:00 AM
Lab ID: 1905360-006 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Acetone	10	1.2	10		µg/L	1	5/13/2019 8:25:58 PM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/13/2019 8:25:58 PM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/13/2019 8:25:58 PM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Chloroform	ND	0.12	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,1-Dichloroethane	0.83	0.14	1.0	J	µg/L	1	5/13/2019 8:25:58 PM	R59856
1,1-Dichloroethene	0.26	0.21	1.0	J	µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/13/2019 8:25:58 PM	R59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/13/2019 8:25:58 PM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:06:00 AM
Lab ID: 1905360-006 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/13/2019 8:25:58 PM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/13/2019 8:25:58 PM	R59856
Surr: 1,2-Dichloroethane-d4	84.3	0	70-130		%Rec	1	5/13/2019 8:25:58 PM	R59856
Surr: 4-Bromofluorobenzene	88.2	0	70-130		%Rec	1	5/13/2019 8:25:58 PM	R59856
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	1	5/13/2019 8:25:58 PM	R59856
Surr: Toluene-d8	88.3	0	70-130		%Rec	1	5/13/2019 8:25:58 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/13/2019 8:25:58 PM	G59856
Surr: BFB	94.0	0	70-130		%Rec	1	5/13/2019 8:25:58 PM	G59856

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:45:00 AM
Lab ID: 1905360-007
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.013	0.0033	0.0094		µg/L	1	5/13/2019 9:23:16 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.5	0.35	1.0		mg/L	1	5/9/2019 5:37:12 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 5:37:12 PM	44776
Surr: DNOP	106	0	70-130		%Rec	1	5/9/2019 5:37:12 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.3	0.25	0.50		mg/L	5	5/8/2019 3:39:20 AM	R59714
Chloride	1600	6.2	50		mg/L	100	5/17/2019 12:46:11 AM	R59924
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 3:39:20 AM	R59714
Bromide	0.72	0.089	0.50		mg/L	5	5/8/2019 3:39:20 AM	R59714
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/8/2019 3:39:20 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 3:39:20 AM	R59714
Sulfate	61	0.27	2.5		mg/L	5	5/8/2019 3:39:20 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/20/2019 11:43:39 PM	F60012
Barium	0.90	0.00065	0.0020		mg/L	1	5/23/2019 1:25:05 PM	A60136
Beryllium	0.00075	0.00028	0.0020	J	mg/L	1	5/20/2019 11:43:39 PM	F60012
Boron	0.83	0.0045	0.040		mg/L	1	5/20/2019 11:43:39 PM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/20/2019 11:43:39 PM	F60012
Calcium	180	0.31	5.0		mg/L	5	5/23/2019 2:28:28 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 11:43:39 PM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 11:43:39 PM	F60012
Copper	ND	0.0013	0.0060		mg/L	1	5/20/2019 11:43:39 PM	F60012
Iron	3.0	0.044	0.10	*	mg/L	5	5/20/2019 11:45:42 PM	F60012
Magnesium	30	0.050	1.0		mg/L	1	5/23/2019 1:25:05 PM	A60136
Manganese	1.8	0.0014	0.010	*	mg/L	5	5/20/2019 11:45:42 PM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 11:43:39 PM	F60012
Nickel	0.012	0.0040	0.010		mg/L	1	5/23/2019 1:25:05 PM	A60136
Potassium	2.8	0.16	1.0		mg/L	1	5/20/2019 11:43:39 PM	F60012
Silver	0.0045	0.00094	0.0050	J	mg/L	1	5/20/2019 11:43:39 PM	F60012
Sodium	1000	8.3	20		mg/L	20	5/23/2019 1:27:06 PM	A60136
Zinc	0.057	0.0023	0.010		mg/L	1	5/23/2019 1:25:05 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/20/2019 9:26:54 PM	44984
Barium	0.99	0.00065	0.0020		mg/L	1	5/20/2019 9:26:54 PM	44984
Beryllium	0.00064	0.00028	0.0020	J	mg/L	1	5/20/2019 9:26:54 PM	44984
Boron	0.81	0.0045	0.040		mg/L	1	5/20/2019 9:26:54 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:45:00 AM
Lab ID: 1905360-007
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:26:54 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 9:26:54 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:26:54 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 9:26:54 PM	44984
Iron	3.9	0.044	0.10	*	mg/L	5	5/20/2019 9:28:56 PM	44984
Manganese	1.9	0.0014	0.010	*	mg/L	5	5/20/2019 9:28:56 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:26:54 PM	44984
Nickel	0.012	0.0040	0.010		mg/L	1	5/20/2019 9:26:54 PM	44984
Silver	0.0043	0.0014	0.0050	J	mg/L	1	5/20/2019 9:26:54 PM	44984
Zinc	ND	0.0058	0.010		mg/L	1	5/20/2019 9:26:54 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 3:53:44 PM	C59904
Arsenic	0.0033	0.00050	0.0050	J	mg/L	5	5/15/2019 3:53:44 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 3:53:44 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 3:53:44 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 3:53:44 PM	C59904
Uranium	0.017	0.00037	0.0025		mg/L	5	5/15/2019 3:53:44 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:42:45 PM	44984
Arsenic	0.0033	0.0016	0.0050	J	mg/L	5	5/20/2019 5:42:45 PM	44984
Lead	ND	0.00027	0.0025		mg/L	5	5/20/2019 5:42:45 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:42:45 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:42:45 PM	44984
Uranium	0.017	0.00042	0.0025		mg/L	5	5/20/2019 5:42:45 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:18:40 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 12:38:27 PM	44850

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:45:00 AM
Lab ID: 1905360-007
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 12:38:27 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 12:38:27 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 12:38:27 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 12:38:27 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 12:38:27 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 12:38:27 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 12:38:27 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 12:38:27 PM	44850
2,4-Dimethylphenol	5.2	3.0	10	J	µg/L	1	5/14/2019 12:38:27 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 12:38:27 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 12:38:27 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:45:00 AM
Lab ID: 1905360-007
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	19	3.1	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 12:38:27 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 12:38:27 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 12:38:27 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Naphthalene	7.5	4.1	10	J	µg/L	1	5/14/2019 12:38:27 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 12:38:27 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 12:38:27 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 12:38:27 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Phenol	8.7	8.0	10	J	µg/L	1	5/14/2019 12:38:27 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 12:38:27 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 12:38:27 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 12:38:27 PM	44850
Surr: 2-Fluorophenol	59.4	0	15-101		%Rec	1	5/14/2019 12:38:27 PM	44850
Surr: Phenol-d5	45.6	0	15-84.6		%Rec	1	5/14/2019 12:38:27 PM	44850
Surr: 2,4,6-Tribromophenol	76.4	0	27.8-112		%Rec	1	5/14/2019 12:38:27 PM	44850
Surr: Nitrobenzene-d5	83.9	0	33-113		%Rec	1	5/14/2019 12:38:27 PM	44850
Surr: 2-Fluorobiphenyl	72.3	0	26.6-107		%Rec	1	5/14/2019 12:38:27 PM	44850
Surr: 4-Terphenyl-d14	80.6	0	18.7-148		%Rec	1	5/14/2019 12:38:27 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	950	3.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Toluene	19	7.0	20	J	µg/L	20	5/13/2019 9:23:16 PM	R59856
Ethylbenzene	43	2.6	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Methyl tert-butyl ether (MTBE)	49	9.1	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2,4-Trimethylbenzene	130	4.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2-Dichloroethane (EDC)	6.4	3.9	20	J	µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Naphthalene	12	5.5	40	J	µg/L	20	5/13/2019 9:23:16 PM	R59856
1-Methylnaphthalene	16	6.3	80	J	µg/L	20	5/13/2019 9:23:16 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:45:00 AM
Lab ID: 1905360-007
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	6.9	80		µg/L	20	5/13/2019 9:23:16 PM	R59856
Acetone	ND	24	200		µg/L	20	5/13/2019 9:23:16 PM	R59856
Bromobenzene	ND	4.9	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Bromodichloromethane	ND	2.7	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Bromoform	ND	5.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Bromomethane	ND	5.5	60		µg/L	20	5/13/2019 9:23:16 PM	R59856
2-Butanone	ND	42	200		µg/L	20	5/13/2019 9:23:16 PM	R59856
Carbon disulfide	ND	9.1	200		µg/L	20	5/13/2019 9:23:16 PM	R59856
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Chlorobenzene	ND	3.9	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Chloroethane	ND	3.6	40		µg/L	20	5/13/2019 9:23:16 PM	R59856
Chloroform	ND	2.4	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Chloromethane	ND	6.4	60		µg/L	20	5/13/2019 9:23:16 PM	R59856
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
cis-1,2-DCE	ND	3.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/13/2019 9:23:16 PM	R59856
Dibromochloromethane	ND	4.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Dibromomethane	ND	4.2	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,1-Dichloroethane	19	2.8	20	J	µg/L	20	5/13/2019 9:23:16 PM	R59856
1,1-Dichloroethene	6.4	4.1	20	J	µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
2-Hexanone	ND	31	200		µg/L	20	5/13/2019 9:23:16 PM	R59856
Isopropylbenzene	ND	3.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
4-Isopropyltoluene	ND	4.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/13/2019 9:23:16 PM	R59856
Methylene Chloride	ND	3.1	60		µg/L	20	5/13/2019 9:23:16 PM	R59856
n-Butylbenzene	ND	4.6	60		µg/L	20	5/13/2019 9:23:16 PM	R59856
n-Propylbenzene	11	4.3	20	J	µg/L	20	5/13/2019 9:23:16 PM	R59856
sec-Butylbenzene	ND	5.0	20		µg/L	20	5/13/2019 9:23:16 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 11:45:00 AM
Lab ID: 1905360-007
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	3.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/13/2019 9:23:16 PM	R59856
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/13/2019 9:23:16 PM	R59856
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/13/2019 9:23:16 PM	R59856
Vinyl chloride	19	3.6	20	J	µg/L	20	5/13/2019 9:23:16 PM	R59856
Xylenes, Total	110	9.1	30		µg/L	20	5/13/2019 9:23:16 PM	R59856
Surr: 1,2-Dichloroethane-d4	86.7	0	70-130		%Rec	20	5/13/2019 9:23:16 PM	R59856
Surr: 4-Bromofluorobenzene	91.4	0	70-130		%Rec	20	5/13/2019 9:23:16 PM	R59856
Surr: Dibromofluoromethane	95.9	0	70-130		%Rec	20	5/13/2019 9:23:16 PM	R59856
Surr: Toluene-d8	89.6	0	70-130		%Rec	20	5/13/2019 9:23:16 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	5.3	0.61	1.0		mg/L	20	5/13/2019 9:23:16 PM	G59856
Surr: BFB	98.2	0	70-130		%Rec	20	5/13/2019 9:23:16 PM	G59856

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 1:30:00 PM
Lab ID: 1905360-008
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.012	0.0033	0.0095		µg/L	1	5/13/2019 9:53:41 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.65	0.35	1.0	J	mg/L	1	5/9/2019 6:01:39 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 6:01:39 PM	44776
Surr: DNOP	107	0	70-130		%Rec	1	5/9/2019 6:01:39 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/8/2019 4:04:09 AM	R59714
Chloride	1000	6.2	50		mg/L	100	5/17/2019 12:58:36 AM	R59924
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 4:04:09 AM	R59714
Bromide	1.4	0.089	0.50		mg/L	5	5/8/2019 4:04:09 AM	R59714
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/8/2019 4:04:09 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 4:04:09 AM	R59714
Sulfate	42	0.27	2.5		mg/L	5	5/8/2019 4:04:09 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.010	0.0025	0.020	J	mg/L	1	5/20/2019 11:47:54 PM	F60012
Barium	0.32	0.00065	0.0020		mg/L	1	5/23/2019 1:31:27 PM	A60136
Beryllium	0.00066	0.00028	0.0020	J	mg/L	1	5/20/2019 11:47:54 PM	F60012
Boron	0.77	0.0045	0.040		mg/L	1	5/20/2019 11:47:54 PM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/20/2019 11:47:54 PM	F60012
Calcium	200	0.62	10		mg/L	10	5/23/2019 1:39:56 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 11:47:54 PM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 11:47:54 PM	F60012
Copper	ND	0.0013	0.0060		mg/L	1	5/20/2019 11:47:54 PM	F60012
Iron	5.7	0.087	0.20	*	mg/L	10	5/23/2019 1:39:56 PM	A60136
Magnesium	34	0.050	1.0		mg/L	1	5/23/2019 1:31:27 PM	A60136
Manganese	2.3	0.0014	0.010	*	mg/L	5	5/20/2019 11:56:45 PM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 11:47:54 PM	F60012
Nickel	0.026	0.0040	0.010		mg/L	1	5/23/2019 1:31:27 PM	A60136
Potassium	2.9	0.16	1.0		mg/L	1	5/20/2019 11:47:54 PM	F60012
Silver	0.0040	0.00094	0.0050	J	mg/L	1	5/20/2019 11:47:54 PM	F60012
Sodium	680	4.2	10		mg/L	10	5/23/2019 1:39:56 PM	A60136
Zinc	0.030	0.0023	0.010		mg/L	1	5/23/2019 1:31:27 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	9.8	0.050	0.40	*	mg/L	20	5/22/2019 7:06:43 PM	44984
Barium	0.46	0.00065	0.0020		mg/L	1	5/20/2019 9:30:54 PM	44984
Beryllium	0.0013	0.00028	0.0020	J	mg/L	1	5/20/2019 9:30:54 PM	44984
Boron	0.76	0.0045	0.040		mg/L	1	5/20/2019 9:30:54 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 1:30:00 PM
Lab ID: 1905360-008
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:30:54 PM	44984
Chromium	0.0019	0.0015	0.0060	J	mg/L	1	5/20/2019 9:30:54 PM	44984
Cobalt	0.0064	0.0031	0.0060		mg/L	1	5/20/2019 9:30:54 PM	44984
Copper	0.0051	0.0041	0.0060	J	mg/L	1	5/20/2019 9:30:54 PM	44984
Iron	8.3	0.087	0.20	*	mg/L	10	5/22/2019 7:04:32 PM	44984
Manganese	2.6	0.0014	0.010	*	mg/L	5	5/20/2019 9:32:58 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:30:54 PM	44984
Nickel	0.035	0.0040	0.010		mg/L	1	5/20/2019 9:30:54 PM	44984
Silver	0.0040	0.0014	0.0050	J	mg/L	1	5/20/2019 9:30:54 PM	44984
Zinc	0.0092	0.0058	0.010	J	mg/L	1	5/22/2019 7:02:28 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:20:07 PM	C59904
Arsenic	0.0033	0.00050	0.0050	J	mg/L	5	5/15/2019 4:20:07 PM	C59904
Lead	0.00036	0.00027	0.0025	J	mg/L	5	5/15/2019 4:20:07 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 4:20:07 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:20:07 PM	C59904
Uranium	0.011	0.00037	0.0025		mg/L	5	5/15/2019 4:20:07 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:44:57 PM	44984
Arsenic	0.0038	0.0016	0.0050	J	mg/L	5	5/20/2019 5:44:57 PM	44984
Lead	0.011	0.00027	0.0025		mg/L	5	5/20/2019 5:44:57 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:44:57 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:44:57 PM	44984
Uranium	0.012	0.00042	0.0025		mg/L	5	5/20/2019 5:44:57 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	5/16/2019 2:20:54 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 1:07:50 PM	44850

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-24
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 1:30:00 PM
Lab ID: 1905360-008
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 1:07:50 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 1:07:50 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 1:07:50 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 1:07:50 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 1:07:50 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 1:07:50 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 1:07:50 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 1:07:50 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 1:07:50 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 1:07:50 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-24
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 1:30:00 PM
Lab ID: 1905360-008
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 1:07:50 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 1:07:50 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 1:07:50 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 1:07:50 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 1:07:50 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 1:07:50 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Phenol	16	8.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 1:07:50 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 1:07:50 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 1:07:50 PM	44850
Surr: 2-Fluorophenol	50.4	0	15-101		%Rec	1	5/14/2019 1:07:50 PM	44850
Surr: Phenol-d5	38.3	0	15-84.6		%Rec	1	5/14/2019 1:07:50 PM	44850
Surr: 2,4,6-Tribromophenol	69.6	0	27.8-112		%Rec	1	5/14/2019 1:07:50 PM	44850
Surr: Nitrobenzene-d5	77.8	0	33-113		%Rec	1	5/14/2019 1:07:50 PM	44850
Surr: 2-Fluorobiphenyl	63.1	0	26.6-107		%Rec	1	5/14/2019 1:07:50 PM	44850
Surr: 4-Terphenyl-d14	72.9	0	18.7-148		%Rec	1	5/14/2019 1:07:50 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3000	33	200		µg/L	200	5/13/2019 9:51:47 PM	R59856
Toluene	14	7.0	20	J	µg/L	20	5/13/2019 10:20:25 PM	R59856
Ethylbenzene	120	2.6	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Methyl tert-butyl ether (MTBE)	110	9.1	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2,4-Trimethylbenzene	4.7	4.3	20	J	µg/L	20	5/13/2019 10:20:25 PM	R59856
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2-Dichloroethane (EDC)	6.6	3.9	20	J	µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Naphthalene	ND	5.5	40		µg/L	20	5/13/2019 10:20:25 PM	R59856
1-Methylnaphthalene	ND	6.3	80		µg/L	20	5/13/2019 10:20:25 PM	R59856

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	6.9	80		µg/L	20	5/13/2019 10:20:25 PM	R59856
Acetone	ND	24	200		µg/L	20	5/13/2019 10:20:25 PM	R59856
Bromobenzene	ND	4.9	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Bromodichloromethane	ND	2.7	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Bromoform	ND	5.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Bromomethane	ND	5.5	60		µg/L	20	5/13/2019 10:20:25 PM	R59856
2-Butanone	ND	42	200		µg/L	20	5/13/2019 10:20:25 PM	R59856
Carbon disulfide	ND	9.1	200		µg/L	20	5/13/2019 10:20:25 PM	R59856
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Chlorobenzene	ND	3.9	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Chloroethane	ND	3.6	40		µg/L	20	5/13/2019 10:20:25 PM	R59856
Chloroform	ND	2.4	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Chloromethane	ND	6.4	60		µg/L	20	5/13/2019 10:20:25 PM	R59856
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
cis-1,2-DCE	ND	3.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/13/2019 10:20:25 PM	R59856
Dibromochloromethane	ND	4.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Dibromomethane	ND	4.2	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,1-Dichloroethane	47	2.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,1-Dichloroethene	14	4.1	20	J	µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
2-Hexanone	ND	31	200		µg/L	20	5/13/2019 10:20:25 PM	R59856
Isopropylbenzene	19	3.8	20	J	µg/L	20	5/13/2019 10:20:25 PM	R59856
4-Isopropyltoluene	ND	4.3	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/13/2019 10:20:25 PM	R59856
Methylene Chloride	ND	3.1	60		µg/L	20	5/13/2019 10:20:25 PM	R59856
n-Butylbenzene	4.6	4.6	60	J	µg/L	20	5/13/2019 10:20:25 PM	R59856
n-Propylbenzene	36	4.3	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
sec-Butylbenzene	ND	5.0	20		µg/L	20	5/13/2019 10:20:25 PM	R59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 1:30:00 PM
Lab ID: 1905360-008 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	3.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/13/2019 10:20:25 PM	R59856
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/13/2019 10:20:25 PM	R59856
Vinyl chloride	22	3.6	20		µg/L	20	5/13/2019 10:20:25 PM	R59856
Xylenes, Total	ND	9.1	30		µg/L	20	5/13/2019 10:20:25 PM	R59856
Surr: 1,2-Dichloroethane-d4	85.8	0	70-130		%Rec	20	5/13/2019 10:20:25 PM	R59856
Surr: 4-Bromofluorobenzene	94.5	0	70-130		%Rec	20	5/13/2019 10:20:25 PM	R59856
Surr: Dibromofluoromethane	95.4	0	70-130		%Rec	20	5/13/2019 10:20:25 PM	R59856
Surr: Toluene-d8	88.7	0	70-130		%Rec	20	5/13/2019 10:20:25 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	8.6	0.61	1.0		mg/L	20	5/13/2019 10:20:25 PM	G59856
Surr: BFB	97.1	0	70-130		%Rec	20	5/13/2019 10:20:25 PM	G59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:45:00 PM
Lab ID: 1905360-009
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	5/13/2019 10:08:55 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.40	0.35	1.0	J	mg/L	1	5/9/2019 6:26:07 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 6:26:07 PM	44776
Surr: DNOP	105	0	70-130		%Rec	1	5/9/2019 6:26:07 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/8/2019 4:28:57 AM	R59714
Chloride	860	6.2	50		mg/L	100	5/17/2019 1:11:01 AM	R59924
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 4:28:57 AM	R59714
Bromide	1.4	0.089	0.50		mg/L	5	5/8/2019 4:28:57 AM	R59714
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/8/2019 4:28:57 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 4:28:57 AM	R59714
Sulfate	52	0.27	2.5		mg/L	5	5/8/2019 4:28:57 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0042	0.0025	0.020	J	mg/L	1	5/20/2019 11:58:47 PM	F60012
Barium	0.43	0.00065	0.0020		mg/L	1	5/23/2019 1:42:19 PM	A60136
Beryllium	0.00072	0.00028	0.0020	J	mg/L	1	5/20/2019 11:58:47 PM	F60012
Boron	0.53	0.0045	0.040		mg/L	1	5/20/2019 11:58:47 PM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/20/2019 11:58:47 PM	F60012
Calcium	160	0.62	10		mg/L	10	5/23/2019 1:44:26 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 11:58:47 PM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 11:58:47 PM	F60012
Copper	0.0021	0.0013	0.0060	J	mg/L	1	5/20/2019 11:58:47 PM	F60012
Iron	0.21	0.0087	0.020		mg/L	1	5/23/2019 1:42:19 PM	A60136
Magnesium	31	0.050	1.0		mg/L	1	5/20/2019 11:58:47 PM	F60012
Manganese	1.8	0.0014	0.010	*	mg/L	5	5/21/2019 12:01:17 AM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 11:58:47 PM	F60012
Nickel	0.029	0.0040	0.010		mg/L	1	5/20/2019 11:58:47 PM	F60012
Potassium	1.1	0.16	1.0		mg/L	1	5/20/2019 11:58:47 PM	F60012
Silver	0.0044	0.00094	0.0050	J	mg/L	1	5/20/2019 11:58:47 PM	F60012
Sodium	670	4.2	10		mg/L	10	5/23/2019 1:44:26 PM	A60136
Zinc	0.035	0.0023	0.010		mg/L	1	5/23/2019 1:42:19 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	11	0.050	0.40	*	mg/L	20	5/22/2019 7:11:02 PM	44984
Barium	0.61	0.00065	0.0020		mg/L	1	5/20/2019 9:34:56 PM	44984
Beryllium	0.0016	0.00028	0.0020	J	mg/L	1	5/20/2019 9:34:56 PM	44984
Boron	0.54	0.0045	0.040		mg/L	1	5/20/2019 9:34:56 PM	44984

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:45:00 PM
Lab ID: 1905360-009
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:34:56 PM	44984
Chromium	0.0035	0.0015	0.0060	J	mg/L	1	5/20/2019 9:34:56 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:34:56 PM	44984
Copper	0.021	0.0041	0.0060		mg/L	1	5/20/2019 9:34:56 PM	44984
Iron	4.7	0.044	0.10	*	mg/L	5	5/20/2019 9:36:58 PM	44984
Manganese	2.2	0.0014	0.010	*	mg/L	5	5/20/2019 9:36:58 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:34:56 PM	44984
Nickel	0.032	0.0040	0.010		mg/L	1	5/20/2019 9:34:56 PM	44984
Silver	0.0041	0.0014	0.0050	J	mg/L	1	5/20/2019 9:34:56 PM	44984
Zinc	0.013	0.0058	0.010		mg/L	1	5/22/2019 7:09:01 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:22:50 PM	C59904
Arsenic	0.0019	0.00050	0.0050	J	mg/L	5	5/15/2019 4:22:50 PM	C59904
Lead	0.00055	0.00027	0.0025	J	mg/L	5	5/15/2019 4:22:50 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 4:22:50 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:22:50 PM	C59904
Uranium	0.033	0.00037	0.0025	*	mg/L	5	5/15/2019 4:22:50 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:47:08 PM	44984
Arsenic	0.0019	0.0016	0.0050	J	mg/L	5	5/20/2019 5:47:08 PM	44984
Lead	0.0070	0.00027	0.0025		mg/L	5	5/20/2019 5:47:08 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:47:08 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:47:08 PM	44984
Uranium	0.031	0.00042	0.0025	*	mg/L	5	5/20/2019 5:47:08 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000048	0.000038	0.00020	J	mg/L	1	5/16/2019 2:23:09 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 1:37:19 PM	44850

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:45:00 PM
Lab ID: 1905360-009
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 1:37:19 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 1:37:19 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 1:37:19 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 1:37:19 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 1:37:19 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 1:37:19 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 1:37:19 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 1:37:19 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 1:37:19 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 1:37:19 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:45:00 PM
Lab ID: 1905360-009
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	3.3	3.1	10	J	µg/L	1	5/14/2019 1:37:19 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 1:37:19 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 1:37:19 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 1:37:19 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 1:37:19 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 1:37:19 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 1:37:19 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 1:37:19 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 1:37:19 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 1:37:19 PM	44850
Surr: 2-Fluorophenol	41.8	0	15-101		%Rec	1	5/14/2019 1:37:19 PM	44850
Surr: Phenol-d5	33.3	0	15-84.6		%Rec	1	5/14/2019 1:37:19 PM	44850
Surr: 2,4,6-Tribromophenol	65.1	0	27.8-112		%Rec	1	5/14/2019 1:37:19 PM	44850
Surr: Nitrobenzene-d5	87.3	0	33-113		%Rec	1	5/14/2019 1:37:19 PM	44850
Surr: 2-Fluorobiphenyl	71.7	0	26.6-107		%Rec	1	5/14/2019 1:37:19 PM	44850
Surr: 4-Terphenyl-d14	81.3	0	18.7-148		%Rec	1	5/14/2019 1:37:19 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	370	1.7	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Toluene	ND	3.5	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Ethylbenzene	ND	1.3	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Methyl tert-butyl ether (MTBE)	290	4.6	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2,4-Trimethylbenzene	2.3	2.1	10	J	µg/L	10	5/13/2019 11:17:47 PM	R59856
1,3,5-Trimethylbenzene	ND	1.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2-Dichloroethane (EDC)	6.1	1.9	10	J	µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2-Dibromoethane (EDB)	ND	1.7	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Naphthalene	ND	2.8	20		µg/L	10	5/13/2019 11:17:47 PM	R59856
1-Methylnaphthalene	ND	3.1	40		µg/L	10	5/13/2019 11:17:47 PM	R59856

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:45:00 PM
Lab ID: 1905360-009 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	3.5	40		µg/L	10	5/13/2019 11:17:47 PM	R59856
Acetone	ND	12	100		µg/L	10	5/13/2019 11:17:47 PM	R59856
Bromobenzene	ND	2.4	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Bromodichloromethane	ND	1.3	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Bromoform	ND	2.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Bromomethane	ND	2.7	30		µg/L	10	5/13/2019 11:17:47 PM	R59856
2-Butanone	ND	21	100		µg/L	10	5/13/2019 11:17:47 PM	R59856
Carbon disulfide	ND	4.5	100		µg/L	10	5/13/2019 11:17:47 PM	R59856
Carbon Tetrachloride	ND	1.4	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Chlorobenzene	ND	1.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Chloroethane	ND	1.8	20		µg/L	10	5/13/2019 11:17:47 PM	R59856
Chloroform	ND	1.2	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Chloromethane	ND	3.2	30		µg/L	10	5/13/2019 11:17:47 PM	R59856
2-Chlorotoluene	ND	2.5	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
4-Chlorotoluene	ND	2.3	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
cis-1,2-DCE	35	1.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
cis-1,3-Dichloropropene	ND	1.4	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2-Dibromo-3-chloropropane	ND	3.3	20		µg/L	10	5/13/2019 11:17:47 PM	R59856
Dibromochloromethane	ND	2.4	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Dibromomethane	ND	2.1	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2-Dichlorobenzene	ND	3.0	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,3-Dichlorobenzene	ND	2.5	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,1-Dichloroethane	140	1.4	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,1-Dichloroethene	50	2.1	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2-Dichloropropane	ND	2.1	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,3-Dichloropropane	ND	2.0	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
2,2-Dichloropropane	ND	2.3	20		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,1-Dichloropropene	ND	1.6	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Hexachlorobutadiene	ND	3.1	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
2-Hexanone	ND	15	100		µg/L	10	5/13/2019 11:17:47 PM	R59856
Isopropylbenzene	21	1.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
4-Isopropyltoluene	ND	2.2	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/13/2019 11:17:47 PM	R59856
Methylene Chloride	ND	1.5	30		µg/L	10	5/13/2019 11:17:47 PM	R59856
n-Butylbenzene	6.3	2.3	30	J	µg/L	10	5/13/2019 11:17:47 PM	R59856
n-Propylbenzene	5.7	2.1	10	J	µg/L	10	5/13/2019 11:17:47 PM	R59856
sec-Butylbenzene	4.1	2.5	10	J	µg/L	10	5/13/2019 11:17:47 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:45:00 PM
Lab ID: 1905360-009
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	1.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
tert-Butylbenzene	ND	2.1	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,1,1,2-Tetrachloroethane	ND	2.1	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,1,2,2-Tetrachloroethane	ND	5.5	20		µg/L	10	5/13/2019 11:17:47 PM	R59856
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
trans-1,3-Dichloropropene	ND	1.7	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2,3-Trichlorobenzene	ND	3.0	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2,4-Trichlorobenzene	ND	2.0	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,1,1-Trichloroethane	3.2	1.7	10	J	µg/L	10	5/13/2019 11:17:47 PM	R59856
1,1,2-Trichloroethane	ND	2.2	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Trichloroethene (TCE)	12	1.7	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
Trichlorofluoromethane	ND	1.9	10		µg/L	10	5/13/2019 11:17:47 PM	R59856
1,2,3-Trichloropropane	ND	3.0	20		µg/L	10	5/13/2019 11:17:47 PM	R59856
Vinyl chloride	7.0	1.8	10	J	µg/L	10	5/13/2019 11:17:47 PM	R59856
Xylenes, Total	ND	4.5	15		µg/L	10	5/13/2019 11:17:47 PM	R59856
Surr: 1,2-Dichloroethane-d4	86.8	0	70-130		%Rec	10	5/13/2019 11:17:47 PM	R59856
Surr: 4-Bromofluorobenzene	92.6	0	70-130		%Rec	10	5/13/2019 11:17:47 PM	R59856
Surr: Dibromofluoromethane	93.2	0	70-130		%Rec	10	5/13/2019 11:17:47 PM	R59856
Surr: Toluene-d8	89.8	0	70-130		%Rec	10	5/13/2019 11:17:47 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	3.6	0.31	0.50		mg/L	10	5/13/2019 11:17:47 PM	G59856
Surr: BFB	96.9	0	70-130		%Rec	10	5/13/2019 11:17:47 PM	G59856

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:37:00 PM
Lab ID: 1905360-010
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.0071	0.0033	0.0095	J	µg/L	1	5/13/2019 10:24:06 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 6:50:45 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 6:50:45 PM	44776
Surr: DNOP	104	0	70-130		%Rec	1	5/9/2019 6:50:45 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/8/2019 4:53:46 AM	R59714
Chloride	1200	6.2	50		mg/L	100	5/17/2019 1:23:26 AM	R59924
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 4:53:46 AM	R59714
Bromide	1.3	0.089	0.50		mg/L	5	5/8/2019 4:53:46 AM	R59714
Nitrogen, Nitrate (As N)	0.25	0.027	0.50	J	mg/L	5	5/8/2019 4:53:46 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 4:53:46 AM	R59714
Sulfate	110	0.27	2.5		mg/L	5	5/8/2019 4:53:46 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0037	0.0025	0.020	J	mg/L	1	5/21/2019 12:03:30 AM	F60012
Barium	0.17	0.00065	0.0020		mg/L	1	5/23/2019 1:46:38 PM	A60136
Beryllium	0.00063	0.00028	0.0020	J	mg/L	1	5/21/2019 12:03:30 AM	F60012
Boron	0.54	0.0045	0.040		mg/L	1	5/21/2019 12:03:30 AM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/21/2019 12:03:30 AM	F60012
Calcium	240	0.62	10		mg/L	10	5/23/2019 1:48:47 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/21/2019 12:03:30 AM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/21/2019 12:03:30 AM	F60012
Copper	ND	0.0013	0.0060		mg/L	1	5/21/2019 12:03:30 AM	F60012
Iron	ND	0.0087	0.020		mg/L	1	5/21/2019 12:03:30 AM	F60012
Magnesium	53	0.050	1.0		mg/L	1	5/21/2019 12:03:30 AM	F60012
Manganese	0.011	0.00029	0.0020		mg/L	1	5/21/2019 12:03:30 AM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/21/2019 12:03:30 AM	F60012
Nickel	0.0043	0.0040	0.010	J	mg/L	1	5/21/2019 12:03:30 AM	F60012
Potassium	1.4	0.16	1.0		mg/L	1	5/21/2019 12:03:30 AM	F60012
Silver	0.0056	0.00094	0.0050		mg/L	1	5/21/2019 12:03:30 AM	F60012
Sodium	640	4.2	10		mg/L	10	5/23/2019 1:48:47 PM	A60136
Zinc	0.048	0.0023	0.010		mg/L	1	5/23/2019 1:46:38 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.9	0.025	0.20	*	mg/L	10	5/22/2019 7:13:20 PM	44984
Barium	0.21	0.00065	0.0020		mg/L	1	5/20/2019 9:38:57 PM	44984
Beryllium	0.0010	0.00028	0.0020	J	mg/L	1	5/20/2019 9:38:57 PM	44984
Boron	0.53	0.0045	0.040		mg/L	1	5/20/2019 9:38:57 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:37:00 PM
Lab ID: 1905360-010
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:38:57 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 9:38:57 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:38:57 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 9:38:57 PM	44984
Iron	2.1	0.044	0.10	*	mg/L	5	5/20/2019 9:41:01 PM	44984
Manganese	0.052	0.00029	0.0020	*	mg/L	1	5/20/2019 9:38:57 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:38:57 PM	44984
Nickel	0.0066	0.0040	0.010	J	mg/L	1	5/20/2019 9:38:57 PM	44984
Silver	0.0059	0.0014	0.0050		mg/L	1	5/20/2019 9:38:57 PM	44984
Zinc	0.0084	0.0058	0.010	J	mg/L	1	5/20/2019 9:38:57 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:25:32 PM	C59904
Arsenic	0.00095	0.00050	0.0050	J	mg/L	5	5/15/2019 4:25:32 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 4:25:32 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 4:25:32 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:25:32 PM	C59904
Uranium	0.047	0.00037	0.0025	*	mg/L	5	5/15/2019 4:25:32 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:49:20 PM	44984
Arsenic	ND	0.0016	0.0050		mg/L	5	5/20/2019 5:49:20 PM	44984
Lead	0.0016	0.00027	0.0025	J	mg/L	5	5/20/2019 5:49:20 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:49:20 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:49:20 PM	44984
Uranium	0.046	0.00042	0.0025	*	mg/L	5	5/20/2019 5:49:20 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:25:24 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 2:06:47 PM	44850

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:37:00 PM
Lab ID: 1905360-010
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 2:06:47 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 2:06:47 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 2:06:47 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 2:06:47 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 2:06:47 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 2:06:47 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 2:06:47 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 2:06:47 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 2:06:47 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 2:06:47 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:37:00 PM
Lab ID: 1905360-010
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 2:06:47 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 2:06:47 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 2:06:47 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 2:06:47 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 2:06:47 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 2:06:47 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 2:06:47 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 2:06:47 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 2:06:47 PM	44850
Surr: 2-Fluorophenol	51.9	0	15-101		%Rec	1	5/14/2019 2:06:47 PM	44850
Surr: Phenol-d5	39.3	0	15-84.6		%Rec	1	5/14/2019 2:06:47 PM	44850
Surr: 2,4,6-Tribromophenol	67.9	0	27.8-112		%Rec	1	5/14/2019 2:06:47 PM	44850
Surr: Nitrobenzene-d5	81.4	0	33-113		%Rec	1	5/14/2019 2:06:47 PM	44850
Surr: 2-Fluorobiphenyl	65.5	0	26.6-107		%Rec	1	5/14/2019 2:06:47 PM	44850
Surr: 4-Terphenyl-d14	75.3	0	18.7-148		%Rec	1	5/14/2019 2:06:47 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.45	0.17	1.0	J	µg/L	1	5/13/2019 11:46:23 PM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Methyl tert-butyl ether (MTBE)	90	0.46	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2-Dichloroethane (EDC)	19	0.19	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/13/2019 11:46:23 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix
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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:37:00 PM
Lab ID: 1905360-010
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Acetone	ND	1.2	10		µg/L	1	5/13/2019 11:46:23 PM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/13/2019 11:46:23 PM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/13/2019 11:46:23 PM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Chloroform	0.39	0.12	1.0	J	µg/L	1	5/13/2019 11:46:23 PM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
cis-1,2-DCE	1.7	0.19	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,1-Dichloroethane	35	0.14	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,1-Dichloroethene	52	0.21	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/13/2019 11:46:23 PM	R59856
Isopropylbenzene	0.57	0.19	1.0	J	µg/L	1	5/13/2019 11:46:23 PM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/13/2019 11:46:23 PM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:37:00 PM
Lab ID: 1905360-010 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,1,1-Trichloroethane	3.6	0.17	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,1,2-Trichloroethane	2.0	0.22	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Trichloroethene (TCE)	4.1	0.17	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/13/2019 11:46:23 PM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/13/2019 11:46:23 PM	R59856
Surr: 1,2-Dichloroethane-d4	84.0	0	70-130		%Rec	1	5/13/2019 11:46:23 PM	R59856
Surr: 4-Bromofluorobenzene	90.7	0	70-130		%Rec	1	5/13/2019 11:46:23 PM	R59856
Surr: Dibromofluoromethane	92.8	0	70-130		%Rec	1	5/13/2019 11:46:23 PM	R59856
Surr: Toluene-d8	87.7	0	70-130		%Rec	1	5/13/2019 11:46:23 PM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.13	0.031	0.050		mg/L	1	5/13/2019 11:46:23 PM	G59856
Surr: BFB	96.2	0	70-130		%Rec	1	5/13/2019 11:46:23 PM	G59856

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:43:00 PM
Lab ID: 1905360-011
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.0063	0.0033	0.0094	J	µg/L	1	5/13/2019 10:39:15 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 7:15:14 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 7:15:14 PM	44776
Surr: DNOP	106	0	70-130		%Rec	1	5/9/2019 7:15:14 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/8/2019 5:43:25 AM	R59714
Chloride	1200	6.2	50		mg/L	100	5/17/2019 1:35:50 AM	R59924
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/8/2019 5:43:25 AM	R59714
Bromide	1.3	0.089	0.50		mg/L	5	5/8/2019 5:43:25 AM	R59714
Nitrogen, Nitrate (As N)	0.27	0.027	0.50	J	mg/L	5	5/8/2019 5:43:25 AM	R59714
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 5:43:25 AM	R59714
Sulfate	110	0.27	2.5		mg/L	5	5/8/2019 5:43:25 AM	R59714
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0085	0.0025	0.020	J	mg/L	1	5/21/2019 12:07:59 AM	F60012
Barium	0.17	0.00065	0.0020		mg/L	1	5/23/2019 1:51:04 PM	A60136
Beryllium	0.00069	0.00028	0.0020	J	mg/L	1	5/21/2019 12:07:59 AM	F60012
Boron	0.53	0.0045	0.040		mg/L	1	5/21/2019 12:07:59 AM	F60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/21/2019 12:07:59 AM	F60012
Calcium	250	0.62	10		mg/L	10	5/23/2019 1:53:13 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/21/2019 12:07:59 AM	F60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/21/2019 12:07:59 AM	F60012
Copper	ND	0.0013	0.0060		mg/L	1	5/21/2019 12:07:59 AM	F60012
Iron	ND	0.0087	0.020		mg/L	1	5/21/2019 12:07:59 AM	F60012
Magnesium	54	0.050	1.0		mg/L	1	5/21/2019 12:07:59 AM	F60012
Manganese	0.0086	0.00029	0.0020		mg/L	1	5/21/2019 12:07:59 AM	F60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/21/2019 12:07:59 AM	F60012
Nickel	0.0049	0.0040	0.010	J	mg/L	1	5/21/2019 12:07:59 AM	F60012
Potassium	1.4	0.16	1.0		mg/L	1	5/21/2019 12:07:59 AM	F60012
Silver	0.0060	0.00094	0.0050		mg/L	1	5/21/2019 12:07:59 AM	F60012
Sodium	630	4.2	10		mg/L	10	5/23/2019 1:53:13 PM	A60136
Zinc	0.028	0.0023	0.010		mg/L	1	5/23/2019 1:51:04 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	2.2	0.012	0.10	*	mg/L	5	5/22/2019 7:15:42 PM	44984
Barium	0.20	0.00065	0.0020		mg/L	1	5/20/2019 9:43:12 PM	44984
Beryllium	0.0010	0.00028	0.0020	J	mg/L	1	5/20/2019 9:43:12 PM	44984
Boron	0.54	0.0045	0.040		mg/L	1	5/20/2019 9:43:12 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:43:00 PM
Lab ID: 1905360-011
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:43:12 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 9:43:12 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:43:12 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 9:43:12 PM	44984
Iron	1.1	0.044	0.10	*	mg/L	5	5/20/2019 9:53:38 PM	44984
Manganese	0.035	0.00029	0.0020		mg/L	1	5/20/2019 9:43:12 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:43:12 PM	44984
Nickel	0.0045	0.0040	0.010	J	mg/L	1	5/20/2019 9:43:12 PM	44984
Silver	0.0062	0.0014	0.0050		mg/L	1	5/20/2019 9:43:12 PM	44984
Zinc	ND	0.0058	0.010		mg/L	1	5/20/2019 9:43:12 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:28:15 PM	C59904
Arsenic	0.00052	0.00050	0.0050	J	mg/L	5	5/15/2019 4:28:15 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 4:28:15 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 4:28:15 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:28:15 PM	C59904
Uranium	0.047	0.00037	0.0025	*	mg/L	5	5/15/2019 4:28:15 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:51:31 PM	44984
Arsenic	ND	0.0016	0.0050		mg/L	5	5/20/2019 5:51:31 PM	44984
Lead	0.00095	0.00027	0.0025	J	mg/L	5	5/20/2019 5:51:31 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:51:31 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:51:31 PM	44984
Uranium	0.047	0.00042	0.0025	*	mg/L	5	5/20/2019 5:51:31 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	5/16/2019 2:27:39 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 2:36:10 PM	44850

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:43:00 PM
Lab ID: 1905360-011
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 2:36:10 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 2:36:10 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 2:36:10 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 2:36:10 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 2:36:10 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 2:36:10 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 2:36:10 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 2:36:10 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 2:36:10 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 2:36:10 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:43:00 PM
Lab ID: 1905360-011
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 2:36:10 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 2:36:10 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 2:36:10 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 2:36:10 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 2:36:10 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 2:36:10 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 2:36:10 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 2:36:10 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 2:36:10 PM	44850
Surr: 2-Fluorophenol	47.6	0	15-101		%Rec	1	5/14/2019 2:36:10 PM	44850
Surr: Phenol-d5	43.1	0	15-84.6		%Rec	1	5/14/2019 2:36:10 PM	44850
Surr: 2,4,6-Tribromophenol	67.3	0	27.8-112		%Rec	1	5/14/2019 2:36:10 PM	44850
Surr: Nitrobenzene-d5	72.4	0	33-113		%Rec	1	5/14/2019 2:36:10 PM	44850
Surr: 2-Fluorobiphenyl	59.0	0	26.6-107		%Rec	1	5/14/2019 2:36:10 PM	44850
Surr: 4-Terphenyl-d14	77.2	0	18.7-148		%Rec	1	5/14/2019 2:36:10 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.41	0.17	1.0	J	µg/L	1	5/14/2019 12:14:56 AM	R59856
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Methyl tert-butyl ether (MTBE)	90	0.46	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2-Dichloroethane (EDC)	19	0.19	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 12:14:56 AM	R59856

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 2:43:00 PM
Lab ID: 1905360-011
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Acetone	ND	1.2	10		µg/L	1	5/14/2019 12:14:56 AM	R59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 12:14:56 AM	R59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 12:14:56 AM	R59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Chloroform	0.39	0.12	1.0	J	µg/L	1	5/14/2019 12:14:56 AM	R59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
cis-1,2-DCE	1.5	0.19	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,1-Dichloroethane	34	0.14	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,1-Dichloroethene	50	0.21	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 12:14:56 AM	R59856
Isopropylbenzene	0.48	0.19	1.0	J	µg/L	1	5/14/2019 12:14:56 AM	R59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 12:14:56 AM	R59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856

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Lab ID: 1905360-011
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,1,1-Trichloroethane	3.5	0.17	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,1,2-Trichloroethane	2.0	0.22	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Trichloroethene (TCE)	3.9	0.17	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 12:14:56 AM	R59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 12:14:56 AM	R59856
Surr: 1,2-Dichloroethane-d4	87.4	0	70-130		%Rec	1	5/14/2019 12:14:56 AM	R59856
Surr: 4-Bromofluorobenzene	88.4	0	70-130		%Rec	1	5/14/2019 12:14:56 AM	R59856
Surr: Dibromofluoromethane	96.7	0	70-130		%Rec	1	5/14/2019 12:14:56 AM	R59856
Surr: Toluene-d8	90.1	0	70-130		%Rec	1	5/14/2019 12:14:56 AM	R59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.13	0.031	0.050		mg/L	1	5/14/2019 12:14:56 AM	G59856
Surr: BFB	96.6	0	70-130		%Rec	1	5/14/2019 12:14:56 AM	G59856

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PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:21:00 PM
Lab ID: 1905360-012
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/13/2019 10:54:25 PM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 7:39:47 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 7:39:47 PM	44776
Surr: DNOP	104	0	70-130		%Rec	1	5/9/2019 7:39:47 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/8/2019 9:52:34 AM	R59744
Chloride	3200	31	250		mg/L	500	5/17/2019 1:48:15 AM	R59924
Nitrogen, Nitrite (As N)	3.3	0.090	2.0		mg/L	20	5/8/2019 10:05:26 AM	R59744
Bromide	0.93	0.089	0.50		mg/L	5	5/8/2019 9:52:34 AM	R59744
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/8/2019 9:52:34 AM	R59744
Phosphorus, Orthophosphate (As P)	0.34	0.20	2.5	J	mg/L	5	5/8/2019 9:52:34 AM	R59744
Sulfate	560	1.1	10		mg/L	20	5/8/2019 10:05:26 AM	R59744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.018	0.0025	0.020	J	mg/L	1	5/23/2019 1:55:31 PM	A60136
Barium	0.051	0.00065	0.0020		mg/L	1	5/23/2019 1:55:31 PM	A60136
Beryllium	0.0011	0.00028	0.0020	J	mg/L	1	5/21/2019 12:12:26 AM	D60012
Boron	2.1	0.023	0.20		mg/L	5	5/21/2019 12:14:48 AM	D60012
Cadmium	ND	0.00055	0.0020		mg/L	1	5/21/2019 12:12:26 AM	D60012
Calcium	270	0.31	5.0		mg/L	5	5/23/2019 1:57:49 PM	A60136
Chromium	ND	0.0015	0.0060		mg/L	1	5/21/2019 12:12:26 AM	D60012
Cobalt	ND	0.0031	0.0060		mg/L	1	5/21/2019 12:12:26 AM	D60012
Copper	ND	0.0013	0.0060		mg/L	1	5/21/2019 12:12:26 AM	D60012
Iron	0.034	0.0087	0.020		mg/L	1	5/23/2019 1:55:31 PM	A60136
Magnesium	54	0.050	1.0		mg/L	1	5/21/2019 12:12:26 AM	D60012
Manganese	0.0019	0.00029	0.0020	J	mg/L	1	5/21/2019 12:12:26 AM	D60012
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/21/2019 12:12:26 AM	D60012
Nickel	0.024	0.0040	0.010		mg/L	1	5/21/2019 12:12:26 AM	D60012
Potassium	5.2	0.16	1.0		mg/L	1	5/21/2019 12:12:26 AM	D60012
Silver	0.0071	0.00094	0.0050		mg/L	1	5/21/2019 12:12:26 AM	D60012
Sodium	2100	21	50		mg/L	50	5/23/2019 1:59:56 PM	A60136
Zinc	0.037	0.0023	0.010		mg/L	1	5/23/2019 1:55:31 PM	A60136
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.7	0.025	0.20	*	mg/L	10	5/22/2019 7:20:01 PM	44984
Barium	0.12	0.00065	0.0020		mg/L	1	5/20/2019 9:55:51 PM	44984
Beryllium	0.0013	0.00028	0.0020	J	mg/L	1	5/20/2019 9:55:51 PM	44984
Boron	2.2	0.023	0.20		mg/L	5	5/20/2019 9:57:56 PM	44984

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Lab ID: 1905360-012
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:55:51 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 9:55:51 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:55:51 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 9:55:51 PM	44984
Iron	3.7	0.044	0.10	*	mg/L	5	5/20/2019 9:57:56 PM	44984
Manganese	0.063	0.00029	0.0020	*	mg/L	1	5/20/2019 9:55:51 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:55:51 PM	44984
Nickel	0.014	0.0040	0.010		mg/L	1	5/20/2019 9:55:51 PM	44984
Silver	0.0068	0.0014	0.0050		mg/L	1	5/20/2019 9:55:51 PM	44984
Zinc	0.011	0.0058	0.010		mg/L	1	5/22/2019 7:17:55 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:30:58 PM	C59904
Arsenic	0.00073	0.00050	0.0050	J	mg/L	5	5/15/2019 4:30:58 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 4:30:58 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 4:30:58 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:30:58 PM	C59904
Uranium	0.046	0.00037	0.0025	*	mg/L	5	5/15/2019 4:30:58 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:53:43 PM	44984
Arsenic	ND	0.0016	0.0050		mg/L	5	5/20/2019 5:53:43 PM	44984
Lead	0.0037	0.00027	0.0025		mg/L	5	5/20/2019 5:53:43 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:53:43 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:53:43 PM	44984
Uranium	0.046	0.00042	0.0025	*	mg/L	5	5/20/2019 5:53:43 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:29:56 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 3:05:54 PM	44850

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 3:05:54 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 3:05:54 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 3:05:54 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 3:05:54 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 3:05:54 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 3:05:54 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 3:05:54 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 3:05:54 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 3:05:54 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 3:05:54 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:21:00 PM
Lab ID: 1905360-012
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 3:05:54 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 3:05:54 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 3:05:54 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 3:05:54 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 3:05:54 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 3:05:54 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 3:05:54 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 3:05:54 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 3:05:54 PM	44850
Surr: 2-Fluorophenol	50.6	0	15-101		%Rec	1	5/14/2019 3:05:54 PM	44850
Surr: Phenol-d5	38.5	0	15-84.6		%Rec	1	5/14/2019 3:05:54 PM	44850
Surr: 2,4,6-Tribromophenol	67.4	0	27.8-112		%Rec	1	5/14/2019 3:05:54 PM	44850
Surr: Nitrobenzene-d5	71.4	0	33-113		%Rec	1	5/14/2019 3:05:54 PM	44850
Surr: 2-Fluorobiphenyl	55.3	0	26.6-107		%Rec	1	5/14/2019 3:05:54 PM	44850
Surr: 4-Terphenyl-d14	78.4	0	18.7-148		%Rec	1	5/14/2019 3:05:54 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 3:35:26 AM	B59856

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Acetone	5.3	1.2	10	J	µg/L	1	5/14/2019 3:35:26 AM	B59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 3:35:26 AM	B59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 3:35:26 AM	B59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,1-Dichloroethane	0.66	0.14	1.0	J	µg/L	1	5/14/2019 3:35:26 AM	B59856
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 3:35:26 AM	B59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 3:35:26 AM	B59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 2019 2nd QTR MKTF WELLS
Collection Date: 5/6/2019 3:21:00 PM
Lab ID: 1905360-012
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 3:35:26 AM	B59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 3:35:26 AM	B59856
Surr: 1,2-Dichloroethane-d4	86.9	0	70-130		%Rec	1	5/14/2019 3:35:26 AM	B59856
Surr: 4-Bromofluorobenzene	90.4	0	70-130		%Rec	1	5/14/2019 3:35:26 AM	B59856
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	5/14/2019 3:35:26 AM	B59856
Surr: Toluene-d8	88.0	0	70-130		%Rec	1	5/14/2019 3:35:26 AM	B59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/14/2019 3:35:26 AM	G59856
Surr: BFB	96.5	0	70-130		%Rec	1	5/14/2019 3:35:26 AM	G59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB-44984** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **44984** RunNo: **60012**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0029	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-44984** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **44984** RunNo: **60012**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025329** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	127	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.6	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	99.6	50	150			J
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0019	0.0020	0.002000	0	95.6	50	150			J
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Cobalt	0.0062	0.0060	0.006000	0	104	50	150			
Iron	0.018	0.020	0.02000	0	88.2	50	150			J
Manganese	0.0022	0.0020	0.002000	0	111	50	150			
Molybdenum	0.010	0.0080	0.008000	0	125	50	150			
Nickel	0.0055	0.010	0.005000	0	109	50	150			J
Silver	0.0052	0.0050	0.005000	0	104	50	150			

Sample ID: **LCS-44984** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **44984** RunNo: **60012**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025331** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Beryllium	0.51	0.0020	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LCS-44984**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025331** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.9	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.50	0.020	0.5000	0	99.4	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Molybdenum	0.50	0.0080	0.5000	0	101	85	115			
Nickel	0.49	0.010	0.5000	0	97.2	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Sample ID: **LLLCS-44984**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025339** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0059	0.010	0.005000	0	118	50	150			J

Sample ID: **MB-44984**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID: **LLLCS-44984**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0061	0.0060	0.006000	0	101	50	150			

Sample ID: **LCS-44984**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB-D**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **D60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025856** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID: **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **D60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025858** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.0020	0.0020	0.002000	0	102	50	150			
Boron	0.039	0.040	0.04000	0	97.6	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	104	50	150			
Chromium	0.0057	0.0060	0.006000	0	94.7	50	150			J
Cobalt	0.0057	0.0060	0.006000	0	95.8	50	150			J
Copper	0.0058	0.0060	0.006000	0	96.6	50	150			J
Magnesium	0.54	1.0	0.5000	0	107	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0082	0.0080	0.008000	0	103	50	150			
Nickel	0.0047	0.010	0.005000	0	94.2	50	150			J
Potassium	0.49	1.0	0.5000	0	97.6	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			

Sample ID: **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **D60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.49	0.0020	0.5000	0	99.0	85	115			
Boron	0.50	0.040	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.6	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **D60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.50	0.0060	0.5000	0	99.1	85	115			
Magnesium	52	1.0	50.00	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Molybdenum	0.51	0.0080	0.5000	0	102	85	115			
Nickel	0.49	0.010	0.5000	0	97.0	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID: **MB-F**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **F60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025871** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID: **LLLCS-F**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **F60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	113	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	99.3	50	150			J
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0021	0.0020	0.002000	0	104	50	150			
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0055	0.0060	0.006000	0	92.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LLLCS-F** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **F60012** RunNo: **60012**

Prep Date: Analysis Date: **5/20/2019** SeqNo: **2025873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0077	0.0060	0.006000	0	129	50	150			
Iron	0.012	0.020	0.02000	0	62.5	50	150			J
Magnesium	0.53	1.0	0.5000	0	106	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0088	0.0080	0.008000	0	110	50	150			
Nickel	0.0055	0.010	0.005000	0	110	50	150			J
Potassium	0.44	1.0	0.5000	0	87.2	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			

Sample ID: **LCS-F** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **F60012** RunNo: **60012**

Prep Date: Analysis Date: **5/20/2019** SeqNo: **2025875** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.6	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Cobalt	0.49	0.0060	0.5000	0	97.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Iron	0.48	0.020	0.5000	0	95.0	85	115			
Magnesium	51	1.0	50.00	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	97.8	85	115			
Molybdenum	0.51	0.0080	0.5000	0	102	85	115			
Nickel	0.49	0.010	0.5000	0	97.2	85	115			
Potassium	50	1.0	50.00	0	99.9	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Nickel	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0074	0.020	0.01000	0	74.0	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.8	50	150			J
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.50	1.0	0.5000	0	101	50	150			J
Nickel	0.0028	0.010	0.005000	0	56.3	50	150			J
Sodium	0.51	1.0	0.5000	0	102	50	150			J
Zinc	0.0068	0.010	0.005000	0	135	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	105	85	115			
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Nickel	0.48	0.010	0.5000	0	96.4	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	98.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB-D** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **D60012** RunNo: **60012**
Prep Date: Analysis Date: **5/20/2019** SeqNo: **2025857** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID: **LLLCS-D** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **D60012** RunNo: **60012**
Prep Date: Analysis Date: **5/20/2019** SeqNo: **2025859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.0020	0.0020	0.002000	0	102	50	150			
Boron	0.039	0.040	0.04000	0	97.6	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	104	50	150			
Chromium	0.0057	0.0060	0.006000	0	94.7	50	150			J
Cobalt	0.0057	0.0060	0.006000	0	95.8	50	150			J
Copper	0.0058	0.0060	0.006000	0	96.6	50	150			J
Magnesium	0.54	1.0	0.5000	0	107	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0082	0.0080	0.008000	0	103	50	150			
Nickel	0.0047	0.010	0.005000	0	94.2	50	150			J
Potassium	0.49	1.0	0.5000	0	97.6	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			

Sample ID: **LCS-D** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **D60012** RunNo: **60012**
Prep Date: Analysis Date: **5/20/2019** SeqNo: **2025861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.49	0.0020	0.5000	0	99.0	85	115			
Boron	0.50	0.040	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.6	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.50	0.0060	0.5000	0	99.1	85	115			
Magnesium	52	1.0	50.00	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Molybdenum	0.51	0.0080	0.5000	0	102	85	115			
Nickel	0.49	0.010	0.5000	0	97.0	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID: **MB-F**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **F60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025872** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID: **LLLCS-F**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **F60012**	RunNo: **60012**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2025874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	113	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	99.3	50	150			J
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0021	0.0020	0.002000	0	104	50	150			
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0055	0.0060	0.006000	0	92.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LLLCS-F** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **F60012** RunNo: **60012**

Prep Date: Analysis Date: **5/20/2019** SeqNo: **2025874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0077	0.0060	0.006000	0	129	50	150			
Iron	0.012	0.020	0.02000	0	62.5	50	150			J
Magnesium	0.53	1.0	0.5000	0	106	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0088	0.0080	0.008000	0	110	50	150			
Nickel	0.0055	0.010	0.005000	0	110	50	150			J
Potassium	0.44	1.0	0.5000	0	87.2	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			

Sample ID: **LCS-F** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **LCSW** Batch ID: **F60012** RunNo: **60012**

Prep Date: Analysis Date: **5/20/2019** SeqNo: **2025876** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.6	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Cobalt	0.49	0.0060	0.5000	0	97.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Iron	0.48	0.020	0.5000	0	95.0	85	115			
Magnesium	51	1.0	50.00	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	97.8	85	115			
Molybdenum	0.51	0.0080	0.5000	0	102	85	115			
Nickel	0.49	0.010	0.5000	0	97.2	85	115			
Potassium	50	1.0	50.00	0	99.9	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **PBW** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031494** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Nickel	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **PBW** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031494** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031495** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0074	0.020	0.01000	0	74.0	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.8	50	150			J
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.50	1.0	0.5000	0	101	50	150			J
Nickel	0.0028	0.010	0.005000	0	56.3	50	150			J
Sodium	0.51	1.0	0.5000	0	102	50	150			J
Zinc	0.0068	0.010	0.005000	0	135	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **LCSW** Batch ID: **A60136** RunNo: **60136**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2031496** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	105	85	115			
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Nickel	0.48	0.010	0.5000	0	96.4	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	98.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB-44984** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-44984** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025946** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	91.7	50	150			J
Arsenic	0.00089	0.0010	0.001000	0	89.5	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.1	50	150			J
Selenium	0.0011	0.0010	0.001000	0	114	50	150			
Thallium	0.00044	0.00050	0.0005000	0	88.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.6	50	150			J

Sample ID: **MSLCS-44984** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025950** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.0	85	115			
Thallium	0.012	0.00050	0.01250	0	98.9	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID: **1905360-003GLLMS** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-30** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2026043** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.016	0.00050	0.01250	0.004190	95.1	70	130			
Thallium	0.012	0.00050	0.01250	0	98.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **1905360-003GLLMS** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-30** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2026045** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.016	0.00050	0.01250	0.004190	97.5	70	130	1.82	20	
Thallium	0.012	0.00050	0.01250	0	99.6	70	130	1.26	20	

Sample ID: **1905360-004GLLMS** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-29** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2026050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0.0008197	99.7	70	130			
Thallium	0.012	0.00050	0.01250	.00005306	98.0	70	130			
Uranium	0.023	0.00050	0.01250	0.009107	108	70	130			

Sample ID: **1905360-003GLLMS** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-30** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2026147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0050	0.02500	0	102	70	130			
Arsenic	0.025	0.0050	0.02500	0	101	70	130			
Selenium	0.027	0.0050	0.02500	0	107	70	130			
Uranium	0.048	0.0025	0.01250	0.03392	114	70	130			

Sample ID: **1905360-003GLLMS** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-30** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2026149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0050	0.02500	0	95.5	70	130	6.89	20	
Arsenic	0.026	0.0050	0.02500	0	105	70	130	3.47	20	
Selenium	0.025	0.0050	0.02500	0	101	70	130	5.78	20	
Uranium	0.048	0.0025	0.01250	0.03392	110	70	130	0.889	20	

Sample ID: **1905360-004GLLMS** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-29** Batch ID: **44984** RunNo: **60024**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2026154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0050	0.02500	0	111	70	130			
Arsenic	0.027	0.0050	0.02500	0	106	70	130			
Selenium	0.022	0.0050	0.02500	0	88.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021325** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00084	0.0010	0.001000	0	83.8	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.8	50	150			J
Selenium	0.0012	0.0010	0.001000	0	121	50	150			
Thallium	0.00047	0.00050	0.0005000	0	94.5	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.0	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.9	85	115			
Thallium	0.012	0.00050	0.01250	0	96.4	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C60134** RunNo: **60134**
Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030949** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C60134**	RunNo: **60134**
Prep Date:	Analysis Date: **5/23/2019**	SeqNo: **2030950** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00048	0.00050	0.0005000	0	96.3	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C60134**	RunNo: **60134**
Prep Date:	Analysis Date: **5/23/2019**	SeqNo: **2030951** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	98.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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WO#: **1905360**

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Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB-44956**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44956**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-44956**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44956**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.0	80	120			

Sample ID: **1905360-003GMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-30**	Batch ID: **44956**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022565** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.6	75	125			

Sample ID: **1905360-003GMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-30**	Batch ID: **44956**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022566** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.2	75	125	0.417	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59714** RunNo: **59714**
Prep Date: Analysis Date: **5/7/2019** SeqNo: **2013489** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59714** RunNo: **59714**
Prep Date: Analysis Date: **5/7/2019** SeqNo: **2013490** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	110	90	110			
Chloride	4.8	0.50	5.000	0	96.1	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.8	90	110			
Bromide	2.4	0.10	2.500	0	97.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.6	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59744** RunNo: **59744**
Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59744** RunNo: **59744**
Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59744**	RunNo: **59744**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	95.2	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	98.0	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.1	90	110			
Sulfate	9.2	0.50	10.00	0	91.6	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R59924**	RunNo: **59924**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023627** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59924**	RunNo: **59924**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.9	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A59981**	RunNo: **59981**
Prep Date:	Analysis Date: **5/17/2019**	SeqNo: **2024389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.092	0.50								J

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A59981**	RunNo: **59981**
Prep Date:	Analysis Date: **5/17/2019**	SeqNo: **2024390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

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Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LCS-44861**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44861**	RunNo: **59854**
Prep Date: **5/13/2019**	Analysis Date: **5/13/2019**	SeqNo: **2018984** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.087	0.010	0.1000	0	86.8	70	130			

Sample ID: **MB-44861**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44861**	RunNo: **59854**
Prep Date: **5/13/2019**	Analysis Date: **5/13/2019**	SeqNo: **2018985** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

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Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **LCS-44776**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **44776**	RunNo: **59674**
Prep Date: **5/8/2019**	Analysis Date: **5/8/2019**	SeqNo: **2013806** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.9	1.0	5.000	0	118	71.8	135			
Surr: DNOP	0.54		0.5000		108	70	130			

Sample ID: **MB-44776**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **44776**	RunNo: **59674**
Prep Date: **5/8/2019**	Analysis Date: **5/8/2019**	SeqNo: **2013807** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		108	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

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30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	83.7	70	130			
Toluene	18	1.0	20.00	0	89.7	70	130			
Chlorobenzene	19	1.0	20.00	0	94.1	70	130			
1,1-Dichloroethene	15	1.0	20.00	0	77.1	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	79.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.8	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.4	70	130			
Surr: Toluene-d8	8.8		10.00		88.5	70	130			

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019090** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	79.4	70	130			
Toluene	17	1.0	20.00	0	85.6	70	130			
Chlorobenzene	18	1.0	20.00	0	91.0	70	130			
1,1-Dichloroethene	14	1.0	20.00	0	70.4	70	130			
Trichloroethene (TCE)	15	1.0	20.00	0	75.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.2	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019128** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
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Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019128** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	0.37	3.0								J
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019128** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.0	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.9	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.4	70	130			
Surr: Toluene-d8	8.8		10.00		88.4	70	130			

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.9	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.4	70	130			
Surr: Toluene-d8	9.0		10.00		90.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **mb-44850** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44850** RunNo: **59871**
Prep Date: **5/10/2019** Analysis Date: **5/14/2019** SeqNo: **2019766** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **mb-44850** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44850** RunNo: **59871**
Prep Date: **5/10/2019** Analysis Date: **5/14/2019** SeqNo: **2019766** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.4	15	101			
Surr: Phenol-d5	71		200.0		35.3	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		59.2	27.8	112			
Surr: Nitrobenzene-d5	67		100.0		67.0	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		60.5	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		63.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**
30-May-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF WELLS

Sample ID: **lcs-44850** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **44850** RunNo: **59871**
Prep Date: **5/10/2019** Analysis Date: **5/14/2019** SeqNo: **2019767** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	71.5	32.2	94			
4-Chloro-3-methylphenol	170	10	200.0	0	85.8	37.7	101			
2-Chlorophenol	160	10	200.0	0	77.8	32.6	90.1			
1,4-Dichlorobenzene	56	10	100.0	0	55.9	30	87.2			
2,4-Dinitrotoluene	66	10	100.0	0	66.2	35.9	85.8			
N-Nitrosodi-n-propylamine	85	10	100.0	0	84.7	37.1	108			
4-Nitrophenol	90	10	200.0	0	45.2	22.4	86.6			
Pentachlorophenol	110	20	200.0	0	55.8	31.6	91			
Phenol	95	10	200.0	0	47.4	21.7	84.9			
Pyrene	73	10	100.0	0	72.9	46.3	103			
1,2,4-Trichlorobenzene	65	10	100.0	0	65.2	30.2	88.3			
Surr: 2-Fluorophenol	94		200.0		47.0	15	101			
Surr: Phenol-d5	79		200.0		39.6	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		78.5	27.8	112			
Surr: Nitrobenzene-d5	69		100.0		69.1	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		59.5	26.6	107			
Surr: 4-Terphenyl-d14	79		100.0		79.5	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905360**

30-May-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF WELLS

Sample ID: **1905360-004a ms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-29**	Batch ID: **G59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.43	0.050	0.5000	0	85.0	70	130			
Surr: BFB	9.6		10.00		96.5	70	130			

Sample ID: **1905360-004a msd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-29**	Batch ID: **G59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019137** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.39	0.050	0.5000	0	78.4	70	130	8.07	20	
Surr: BFB	9.6		10.00		95.9	70	130	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019157** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.2	70	130			
Surr: BFB	9.9		10.00		99.1	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.7		10.00		96.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1905360 RcptNo: 1

Received By: Isaiah Ortiz 5/7/2019 4:04:00 PM I-OX

Completed By: Isaiah Ortiz 5/7/2019 4:17:28 PM I-OX

Reviewed By: LB 5/8/19

LB: JJC 5-8-19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐ JJC 5-8-19
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ JJC 5-8-19 No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 30 (<2 or >12 unless noted)
Adjusted? yes
Checked by: JJC 5-8-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks: ~0.4 ml HNO_3 was added to 0006F for <2 Metals dissolve analysis. JJC 5-8-19

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Yes			
2	5.3	Good	Yes			
3	5.2	Good	Yes			
4	3.2	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1905360 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
5	4.5	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
X Standard ☐ Rush_____

Project Name:
2019 2ND QTR - MKTF WELLS

Project #:

Project Manager:
BRIAN MOORE

Sampler: CAJOHNSON1@MARATHONPETROLEUM.COM
On Ice: ■ Yes ☐ No
Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905366	8260+MTBE	8015D(DRO/MRO/GRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	MAJOR CATIONS/ANIONS		METHOD 8011 - EDB								Air Bubbles (Y or N)
5/6/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-001	X															
5/6/2019	700	AQUEOUS	TRIP BLANK	MISC	MISC	-002	X															
5/6/2019	910	AQUEOUS	MKTF-30	MISC	MISC	-003	X	X	X	X	X	X		X								
5/6/2019	955	AQUEOUS	MKTF-29	MISC	MISC	-004	X	X	2	X	X	X		X								
5/6/2019	1040	AQUEOUS	MKTF-28	MISC	MISC	-005	X	X	X	X	X	X										
5/6/2019	1106	AQUEOUS	MKTF-27	MISC	MISC	-006	X	X	X	X	X	X		X								
5/6/2019	1145	AQUEOUS	MKTF-2	MISC	MISC	-007	X	X	X	X	X	X		X								
5/6/2019	1330	AQUEOUS	MKTF-24	MISC	MISC	-008	X	X	X	X	X	X		X								
5/6/2019	1545	AQUEOUS	MKTF-25	MISC	MISC	-009	X	X	X	X	X	X		X								
5/6/2019	1437	AQUEOUS	MKTF-31	MISC	MISC	-010	X	X	X	X	X	X		X								
5/6/2019	1443	AQUEOUS	DUPLICATE	MISC	MISC	-011	X	X	X	X	X	X		X								
5/6/2019	1521	AQUEOUS	MKTF-40	MISC	MISC	-012	X	X	X	X	X	X		X								
							X															

Date: 5/7/19 Time: 1400 Relinquished by: [signature] Received by: Jaime Virgil Date: 5-7-19 Time: 1405

Date: 5/7/19 Time: 1604 Relinquished by: Jaime Virgil Received by: [signature] CDO Date: 5/7/19 Time: 1604

Remarks: 3.9+0.1=3.8°C 4.6-0.1=4.5°C
5.4+0.1=5.3°C
5.3-0.1=5.2°C
3.3-0.1=3.2°C

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 30, 2019

Brian Moore
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2019 2nd QTR MKTF Wells OrderNo.: 1905364

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/7/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 7:00:00 AM
Lab ID: 1905364-001
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Naphthalene	0.31	0.28	2.0	J	µg/L	1	5/14/2019 4:04:08 AM	B59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Acetone	ND	1.2	10		µg/L	1	5/14/2019 4:04:08 AM	B59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 4:04:08 AM	B59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 4:04:08 AM	B59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 4:04:08 AM	B59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 7:00:00 AM
Lab ID: 1905364-001 **Matrix:** AQUEOUS **Received Date:** 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 4:04:08 AM	B59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 4:04:08 AM	B59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 4:04:08 AM	B59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 4:04:08 AM	B59856
Surr: 1,2-Dichloroethane-d4	85.6	0	70-130		%Rec	1	5/14/2019 4:04:08 AM	B59856
Surr: 4-Bromofluorobenzene	90.4	0	70-130		%Rec	1	5/14/2019 4:04:08 AM	B59856
Surr: Dibromofluoromethane	95.4	0	70-130		%Rec	1	5/14/2019 4:04:08 AM	B59856
Surr: Toluene-d8	88.5	0	70-130		%Rec	1	5/14/2019 4:04:08 AM	B59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date:
Lab ID: 1905364-002
Matrix: TRIP BLANK
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Acetone	ND	1.2	10		µg/L	1	5/14/2019 4:32:46 AM	B59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 4:32:46 AM	B59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 4:32:46 AM	B59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 4:32:46 AM	B59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date:
Lab ID: 1905364-002
Matrix: TRIP BLANK
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 4:32:46 AM	B59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 4:32:46 AM	B59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 4:32:46 AM	B59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 4:32:46 AM	B59856
Surr: 1,2-Dichloroethane-d4	86.6	0	70-130		%Rec	1	5/14/2019 4:32:46 AM	B59856
Surr: 4-Bromofluorobenzene	89.6	0	70-130		%Rec	1	5/14/2019 4:32:46 AM	B59856
Surr: Dibromofluoromethane	96.2	0	70-130		%Rec	1	5/14/2019 4:32:46 AM	B59856
Surr: Toluene-d8	89.5	0	70-130		%Rec	1	5/14/2019 4:32:46 AM	B59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-42
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 9:05:00 AM
Lab ID: 1905364-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.22	0.0065	0.019		µg/L	2	5/17/2019 9:17:19 AM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	59	0.35	1.0		mg/L	1	5/9/2019 8:04:13 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 8:04:13 PM	44776
Surr: DNOP	108	0	70-130		%Rec	1	5/9/2019 8:04:13 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.88	0.25	0.50		mg/L	5	5/13/2019 11:12:08 AM	R59858
Chloride	1100	6.2	50	*	mg/L	100	5/10/2019 10:37:43 PM	R59816
Nitrogen, Nitrite (As N)	0.91	0.022	0.50		mg/L	5	5/8/2019 12:01:12 PM	R59744
Bromide	1.3	0.089	0.50		mg/L	5	5/8/2019 12:01:12 PM	R59744
Nitrogen, Nitrate (As N)	0.070	0.027	0.50	J	mg/L	5	5/8/2019 12:01:12 PM	R59744
Phosphorus, Orthophosphate (As P)	0.37	0.20	2.5	J	mg/L	5	5/8/2019 12:01:12 PM	R59744
Sulfate	89	0.27	2.5		mg/L	5	5/8/2019 12:01:12 PM	R59744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0062	0.0025	0.020	J	mg/L	1	5/8/2019 9:20:52 PM	A59738
Barium	0.059	0.00065	0.0020		mg/L	1	5/8/2019 9:20:52 PM	A59738
Beryllium	ND	0.00028	0.0020		mg/L	1	5/8/2019 9:20:52 PM	A59738
Boron	0.81	0.0045	0.040		mg/L	1	5/8/2019 9:20:52 PM	A59738
Cadmium	ND	0.00055	0.0020		mg/L	1	5/8/2019 9:20:52 PM	A59738
Calcium	23	0.062	1.0		mg/L	1	5/8/2019 9:20:52 PM	A59738
Chromium	ND	0.0015	0.0060		mg/L	1	5/8/2019 9:20:52 PM	A59738
Cobalt	ND	0.0031	0.0060		mg/L	1	5/8/2019 9:20:52 PM	A59738
Copper	0.0024	0.0013	0.0060	J	mg/L	1	5/8/2019 9:20:52 PM	A59738
Iron	0.037	0.0087	0.020		mg/L	1	5/8/2019 9:20:52 PM	A59738
Magnesium	2.6	0.050	1.0		mg/L	1	5/8/2019 9:20:52 PM	A59738
Manganese	0.11	0.00029	0.0020	*	mg/L	1	5/8/2019 9:20:52 PM	A59738
Molybdenum	0.045	0.0067	0.0080		mg/L	1	5/8/2019 9:20:52 PM	A59738
Nickel	ND	0.0040	0.010		mg/L	1	5/8/2019 9:20:52 PM	A59738
Potassium	1.3	0.16	1.0		mg/L	1	5/8/2019 9:20:52 PM	A59738
Silver	ND	0.00094	0.0050		mg/L	1	5/8/2019 9:20:52 PM	A59738
Sodium	730	4.2	10		mg/L	10	5/9/2019 6:05:03 PM	B59778
Zinc	0.0078	0.0023	0.010	J	mg/L	1	5/8/2019 9:20:52 PM	A59738
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.26	0.0025	0.020	*	mg/L	1	5/20/2019 9:01:26 PM	44984
Barium	0.065	0.00065	0.0020		mg/L	1	5/20/2019 9:01:26 PM	44984
Beryllium	ND	0.00028	0.0020		mg/L	1	5/20/2019 9:01:26 PM	44984
Boron	0.82	0.0045	0.040		mg/L	1	5/20/2019 9:01:26 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-42
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 9:05:00 AM
Lab ID: 1905364-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:01:26 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 9:01:26 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:01:26 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 9:01:26 PM	44984
Iron	0.15	0.0087	0.020		mg/L	1	5/20/2019 9:01:26 PM	44984
Manganese	0.12	0.00029	0.0020	*	mg/L	1	5/20/2019 9:01:26 PM	44984
Molybdenum	0.046	0.0067	0.0080		mg/L	1	5/20/2019 9:01:26 PM	44984
Nickel	ND	0.0040	0.010		mg/L	1	5/20/2019 9:01:26 PM	44984
Silver	ND	0.0014	0.0050		mg/L	1	5/20/2019 9:01:26 PM	44984
Zinc	ND	0.0058	0.010		mg/L	1	5/20/2019 9:01:26 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:33:40 PM	C59904
Arsenic	0.0012	0.00050	0.0050	J	mg/L	5	5/10/2019 5:16:10 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 5:16:10 PM	A59775
Selenium	0.0015	0.00086	0.0050	J	mg/L	5	5/10/2019 5:16:10 PM	A59775
Thallium	0.00069	0.00024	0.0025	J	mg/L	5	5/10/2019 5:16:10 PM	A59775
Uranium	0.012	0.00037	0.0025		mg/L	5	5/10/2019 5:16:10 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/20/2019 5:55:54 PM	44984
Arsenic	0.0017	0.0016	0.0050	J	mg/L	5	5/20/2019 5:55:54 PM	44984
Lead	0.00037	0.00027	0.0025	J	mg/L	5	5/20/2019 5:55:54 PM	44984
Selenium	ND	0.0024	0.0050		mg/L	5	5/20/2019 5:55:54 PM	44984
Thallium	ND	0.00026	0.0025		mg/L	5	5/20/2019 5:55:54 PM	44984
Uranium	0.012	0.00042	0.0025		mg/L	5	5/20/2019 5:55:54 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	5/9/2019 12:39:43 PM	44813
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Acenaphthylene	ND	12	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Aniline	ND	18	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Anthracene	ND	13	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Azobenzene	ND	16	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Benz(a)anthracene	ND	18	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Benzo(a)pyrene	ND	18	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-42
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 9:05:00 AM
Lab ID: 1905364-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	54	100		µg/L	1	5/14/2019 3:35:30 PM	44850
Benzyl alcohol	ND	12	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Bis(2-ethylhexyl)phthalate	ND	22	50		µg/L	1	5/14/2019 3:35:30 PM	44850
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Carbazole	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/14/2019 3:35:30 PM	44850
4-Chloroaniline	ND	11	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2-Chloronaphthalene	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2-Chlorophenol	ND	13	50		µg/L	1	5/14/2019 3:35:30 PM	44850
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Chrysene	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Dibenzofuran	ND	16	50		µg/L	1	5/14/2019 3:35:30 PM	44850
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/14/2019 3:35:30 PM	44850
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/14/2019 3:35:30 PM	44850
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/14/2019 3:35:30 PM	44850
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Diethyl phthalate	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Dimethyl phthalate	ND	16	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/14/2019 3:35:30 PM	44850
2,4-Dimethylphenol	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/14/2019 3:35:30 PM	44850
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/14/2019 3:35:30 PM	44850
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Fluoranthene	ND	12	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Fluorene	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Hexachlorobenzene	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Hexachlorobutadiene	ND	24	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Hexachloroethane	ND	24	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Isophorone	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-42
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 9:05:00 AM
Lab ID: 1905364-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2-Methylnaphthalene	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2-Methylphenol	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
3+4-Methylphenol	ND	18	50		µg/L	1	5/14/2019 3:35:30 PM	44850
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/14/2019 3:35:30 PM	44850
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/14/2019 3:35:30 PM	44850
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Naphthalene	ND	21	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2-Nitroaniline	ND	16	50		µg/L	1	5/14/2019 3:35:30 PM	44850
3-Nitroaniline	ND	16	50		µg/L	1	5/14/2019 3:35:30 PM	44850
4-Nitroaniline	ND	13	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Nitrobenzene	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2-Nitrophenol	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
4-Nitrophenol	ND	38	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Pentachlorophenol	ND	14	100		µg/L	1	5/14/2019 3:35:30 PM	44850
Phenanthrene	ND	14	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Phenol	ND	40	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Pyrene	ND	13	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Pyridine	ND	48	50		µg/L	1	5/14/2019 3:35:30 PM	44850
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/14/2019 3:35:30 PM	44850
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/14/2019 3:35:30 PM	44850
Surr: 2-Fluorophenol	60.4	0	15-101		%Rec	1	5/14/2019 3:35:30 PM	44850
Surr: Phenol-d5	40.5	0	15-84.6		%Rec	1	5/14/2019 3:35:30 PM	44850
Surr: 2,4,6-Tribromophenol	75.8	0	27.8-112		%Rec	1	5/14/2019 3:35:30 PM	44850
Surr: Nitrobenzene-d5	89.0	0	33-113		%Rec	1	5/14/2019 3:35:30 PM	44850
Surr: 2-Fluorobiphenyl	49.8	0	26.6-107		%Rec	1	5/14/2019 3:35:30 PM	44850
Surr: 4-Terphenyl-d14	84.0	0	18.7-148		%Rec	1	5/14/2019 3:35:30 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	7.0	0.33	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Toluene	ND	0.70	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Ethylbenzene	0.33	0.26	2.0	J	µg/L	2	5/14/2019 5:01:22 AM	B59856
Methyl tert-butyl ether (MTBE)	4.0	0.91	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2,4-Trimethylbenzene	3.4	0.43	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,3,5-Trimethylbenzene	1.5	0.38	2.0	J	µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2-Dichloroethane (EDC)	1.6	0.39	2.0	J	µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Naphthalene	9.6	0.55	4.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1-Methylnaphthalene	6.7	0.63	8.0	J	µg/L	2	5/14/2019 5:01:22 AM	B59856

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-42
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 9:05:00 AM
Lab ID: 1905364-003
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	3.6	0.69	8.0	J	µg/L	2	5/14/2019 5:01:22 AM	B59856
Acetone	17	2.4	20	J	µg/L	2	5/14/2019 5:01:22 AM	B59856
Bromobenzene	ND	0.49	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Bromodichloromethane	ND	0.27	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Bromoform	ND	0.58	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Bromomethane	ND	0.55	6.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
2-Butanone	4.9	4.2	20	J	µg/L	2	5/14/2019 5:01:22 AM	B59856
Carbon disulfide	ND	0.91	20		µg/L	2	5/14/2019 5:01:22 AM	B59856
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Chlorobenzene	ND	0.39	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Chloroethane	ND	0.36	4.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Chloroform	ND	0.24	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Chloromethane	ND	0.64	6.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
cis-1,2-DCE	ND	0.38	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Dibromochloromethane	ND	0.48	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Dibromomethane	ND	0.42	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,1-Dichloroethane	ND	0.28	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,1-Dichloroethene	ND	0.41	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
2-Hexanone	ND	3.1	20		µg/L	2	5/14/2019 5:01:22 AM	B59856
Isopropylbenzene	ND	0.38	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
4-Isopropyltoluene	1.9	0.43	2.0	J	µg/L	2	5/14/2019 5:01:22 AM	B59856
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	5/14/2019 5:01:22 AM	B59856
Methylene Chloride	ND	0.31	6.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
n-Butylbenzene	ND	0.46	6.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
n-Propylbenzene	ND	0.43	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
sec-Butylbenzene	ND	0.50	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856

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Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.38	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
tert-Butylbenzene	ND	0.41	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,1,2-Trichloroethane	ND	0.43	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Trichloroethene (TCE)	ND	0.33	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Vinyl chloride	ND	0.36	2.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Xylenes, Total	15	0.91	3.0		µg/L	2	5/14/2019 5:01:22 AM	B59856
Surr: 1,2-Dichloroethane-d4	84.7	0	70-130		%Rec	2	5/14/2019 5:01:22 AM	B59856
Surr: 4-Bromofluorobenzene	91.3	0	70-130		%Rec	2	5/14/2019 5:01:22 AM	B59856
Surr: Dibromofluoromethane	93.6	0	70-130		%Rec	2	5/14/2019 5:01:22 AM	B59856
Surr: Toluene-d8	89.3	0	70-130		%Rec	2	5/14/2019 5:01:22 AM	B59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.16	0.061	0.10		mg/L	2	5/14/2019 5:01:22 AM	G59856
Surr: BFB	100	0	70-130		%Rec	2	5/14/2019 5:01:22 AM	G59856

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-32
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 9:40:00 AM
Lab ID: 1905364-004
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	5/16/2019 2:20:15 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 8:52:59 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 8:52:59 PM	44776
Surr: DNOP	112	0	70-130		%Rec	1	5/9/2019 8:52:59 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.25	0.50		mg/L	5	5/8/2019 12:26:56 PM	R59744
Chloride	450	3.1	25	*	mg/L	50	5/10/2019 10:50:35 PM	R59816
Nitrogen, Nitrite (As N)	0.30	0.022	0.50	J	mg/L	5	5/8/2019 12:26:56 PM	R59744
Bromide	1.1	0.089	0.50		mg/L	5	5/8/2019 12:26:56 PM	R59744
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/8/2019 12:26:56 PM	R59744
Phosphorus, Orthophosphate (As P)	0.72	0.20	2.5	J	mg/L	5	5/8/2019 12:26:56 PM	R59744
Sulfate	93	0.27	2.5		mg/L	5	5/8/2019 12:26:56 PM	R59744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.043	0.0025	0.020		mg/L	1	5/8/2019 9:23:04 PM	A59738
Barium	0.045	0.00065	0.0020		mg/L	1	5/8/2019 9:23:04 PM	A59738
Beryllium	ND	0.00028	0.0020		mg/L	1	5/8/2019 9:23:04 PM	A59738
Boron	1.1	0.023	0.20		mg/L	5	5/8/2019 9:31:49 PM	A59738
Cadmium	ND	0.00055	0.0020		mg/L	1	5/8/2019 9:23:04 PM	A59738
Calcium	29	0.062	1.0		mg/L	1	5/8/2019 9:23:04 PM	A59738
Chromium	ND	0.0015	0.0060		mg/L	1	5/8/2019 9:23:04 PM	A59738
Cobalt	ND	0.0031	0.0060		mg/L	1	5/8/2019 9:23:04 PM	A59738
Copper	0.0026	0.0013	0.0060	J	mg/L	1	5/8/2019 9:23:04 PM	A59738
Iron	0.023	0.0087	0.020		mg/L	1	5/8/2019 9:23:04 PM	A59738
Magnesium	5.1	0.050	1.0		mg/L	1	5/8/2019 9:23:04 PM	A59738
Manganese	0.071	0.00029	0.0020	*	mg/L	1	5/8/2019 9:23:04 PM	A59738
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/8/2019 9:23:04 PM	A59738
Nickel	0.0083	0.0040	0.010	J	mg/L	1	5/8/2019 9:23:04 PM	A59738
Potassium	0.43	0.16	1.0	J	mg/L	1	5/8/2019 9:23:04 PM	A59738
Silver	ND	0.00094	0.0050		mg/L	1	5/8/2019 9:23:04 PM	A59738
Sodium	590	4.2	10		mg/L	10	5/9/2019 6:09:19 PM	B59778
Zinc	0.041	0.0023	0.010		mg/L	1	5/9/2019 6:07:15 PM	B59778
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.5	0.012	0.10	*	mg/L	5	5/20/2019 9:09:54 PM	44984
Barium	0.084	0.00065	0.0020		mg/L	1	5/20/2019 9:07:54 PM	44984
Beryllium	0.00050	0.00028	0.0020	J	mg/L	1	5/20/2019 9:07:54 PM	44984
Boron	1.2	0.023	0.20		mg/L	5	5/20/2019 9:09:54 PM	44984

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EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 9:07:54 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 9:07:54 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 9:07:54 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 9:07:54 PM	44984
Iron	1.5	0.044	0.10	*	mg/L	5	5/20/2019 9:09:54 PM	44984
Manganese	0.12	0.00029	0.0020	*	mg/L	1	5/20/2019 9:07:54 PM	44984
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/20/2019 9:07:54 PM	44984
Nickel	0.0059	0.0040	0.010	J	mg/L	1	5/20/2019 9:07:54 PM	44984
Silver	ND	0.0014	0.0050		mg/L	1	5/20/2019 9:07:54 PM	44984
Zinc	ND	0.0058	0.010		mg/L	1	5/20/2019 9:07:54 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:36:23 PM	C59904
Arsenic	0.0020	0.00050	0.0050	J	mg/L	5	5/10/2019 5:18:53 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 5:18:53 PM	A59775
Selenium	0.0027	0.00086	0.0050	J	mg/L	5	5/10/2019 5:18:53 PM	A59775
Thallium	ND	0.00024	0.0025		mg/L	5	5/10/2019 5:18:53 PM	A59775
Uranium	0.053	0.00037	0.0025	*	mg/L	5	5/10/2019 5:18:53 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/20/2019 4:45:37 PM	44984
Arsenic	0.0024	0.00031	0.0010		mg/L	1	5/20/2019 4:45:37 PM	44984
Lead	0.0015	0.000055	0.00050		mg/L	1	5/20/2019 4:45:37 PM	44984
Selenium	ND	0.00048	0.0010		mg/L	1	5/20/2019 4:45:37 PM	44984
Thallium	ND	0.000052	0.00050		mg/L	1	5/20/2019 4:45:37 PM	44984
Uranium	0.057	0.00042	0.0025	*	mg/L	5	5/20/2019 5:58:06 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000066	0.000038	0.00020	J	mg/L	1	5/9/2019 12:41:57 PM	44813
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 4:05:01 PM	44850

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EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 4:05:01 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 4:05:01 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 4:05:01 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 4:05:01 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 4:05:01 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 4:05:01 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 4:05:01 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 4:05:01 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 4:05:01 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 4:05:01 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 4:05:01 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 4:05:01 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 4:05:01 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 4:05:01 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 4:05:01 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 4:05:01 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 4:05:01 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 4:05:01 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 4:05:01 PM	44850
Surr: 2-Fluorophenol	52.5	0	15-101		%Rec	1	5/14/2019 4:05:01 PM	44850
Surr: Phenol-d5	38.3	0	15-84.6		%Rec	1	5/14/2019 4:05:01 PM	44850
Surr: 2,4,6-Tribromophenol	66.2	0	27.8-112		%Rec	1	5/14/2019 4:05:01 PM	44850
Surr: Nitrobenzene-d5	69.7	0	33-113		%Rec	1	5/14/2019 4:05:01 PM	44850
Surr: 2-Fluorobiphenyl	54.8	0	26.6-107		%Rec	1	5/14/2019 4:05:01 PM	44850
Surr: 4-Terphenyl-d14	70.6	0	18.7-148		%Rec	1	5/14/2019 4:05:01 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.33	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Toluene	ND	0.70	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Ethylbenzene	ND	0.26	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Methyl tert-butyl ether (MTBE)	740	9.1	20		µg/L	20	5/14/2019 5:29:54 AM	B59856
1,2,4-Trimethylbenzene	ND	0.43	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,3,5-Trimethylbenzene	ND	0.38	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2-Dichloroethane (EDC)	14	0.39	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Naphthalene	ND	0.55	4.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1-Methylnaphthalene	ND	0.63	8.0		µg/L	2	5/14/2019 5:58:29 AM	B59856

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Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.69	8.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Acetone	ND	2.4	20		µg/L	2	5/14/2019 5:58:29 AM	B59856
Bromobenzene	ND	0.49	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Bromodichloromethane	ND	0.27	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Bromoform	ND	0.58	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Bromomethane	ND	0.55	6.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
2-Butanone	ND	4.2	20		µg/L	2	5/14/2019 5:58:29 AM	B59856
Carbon disulfide	ND	0.91	20		µg/L	2	5/14/2019 5:58:29 AM	B59856
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Chlorobenzene	ND	0.39	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Chloroethane	ND	0.36	4.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Chloroform	ND	0.24	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Chloromethane	ND	0.64	6.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
cis-1,2-DCE	1.5	0.38	2.0	J	µg/L	2	5/14/2019 5:58:29 AM	B59856
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Dibromochloromethane	ND	0.48	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Dibromomethane	ND	0.42	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,1-Dichloroethane	13	0.28	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,1-Dichloroethene	24	0.41	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
2-Hexanone	ND	3.1	20		µg/L	2	5/14/2019 5:58:29 AM	B59856
Isopropylbenzene	ND	0.38	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
4-Isopropyltoluene	ND	0.43	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	5/14/2019 5:58:29 AM	B59856
Methylene Chloride	ND	0.31	6.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
n-Butylbenzene	ND	0.46	6.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
n-Propylbenzene	ND	0.43	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
sec-Butylbenzene	0.56	0.50	2.0	J	µg/L	2	5/14/2019 5:58:29 AM	B59856

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-32
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 9:40:00 AM
Lab ID: 1905364-004
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.38	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
tert-Butylbenzene	ND	0.41	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,1,2-Trichloroethane	0.86	0.43	2.0	J	µg/L	2	5/14/2019 5:58:29 AM	B59856
Trichloroethene (TCE)	0.34	0.33	2.0	J	µg/L	2	5/14/2019 5:58:29 AM	B59856
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Vinyl chloride	ND	0.36	2.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Xylenes, Total	ND	0.91	3.0		µg/L	2	5/14/2019 5:58:29 AM	B59856
Surr: 1,2-Dichloroethane-d4	85.8	0	70-130		%Rec	2	5/14/2019 5:58:29 AM	B59856
Surr: 4-Bromofluorobenzene	88.5	0	70-130		%Rec	2	5/14/2019 5:58:29 AM	B59856
Surr: Dibromofluoromethane	93.9	0	70-130		%Rec	2	5/14/2019 5:58:29 AM	B59856
Surr: Toluene-d8	88.4	0	70-130		%Rec	2	5/14/2019 5:58:29 AM	B59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.47	0.061	0.10		mg/L	2	5/14/2019 5:58:29 AM	G59856
Surr: BFB	94.4	0	70-130		%Rec	2	5/14/2019 5:58:29 AM	G59856

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-41
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:30:00 AM
Lab ID: 1905364-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	5/16/2019 2:35:17 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 9:17:25 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 9:17:25 PM	44776
Surr: DNOP	104	0	70-130		%Rec	1	5/9/2019 9:17:25 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.31	0.25	0.50	J	mg/L	5	5/8/2019 12:52:39 PM	R59744
Chloride	910	6.2	50	*	mg/L	100	5/10/2019 11:29:08 PM	R59816
Nitrogen, Nitrite (As N)	0.78	0.022	0.50		mg/L	5	5/8/2019 12:52:39 PM	R59744
Bromide	2.1	0.089	0.50		mg/L	5	5/8/2019 12:52:39 PM	R59744
Nitrogen, Nitrate (As N)	4.8	0.027	0.50		mg/L	5	5/8/2019 12:52:39 PM	R59744
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 12:52:39 PM	R59744
Sulfate	62	0.27	2.5		mg/L	5	5/8/2019 12:52:39 PM	R59744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0061	0.0025	0.020	J	mg/L	1	5/8/2019 9:25:15 PM	A59738
Barium	0.075	0.00065	0.0020		mg/L	1	5/8/2019 9:25:15 PM	A59738
Beryllium	ND	0.00028	0.0020		mg/L	1	5/8/2019 9:25:15 PM	A59738
Boron	0.92	0.0045	0.040		mg/L	1	5/8/2019 9:25:15 PM	A59738
Cadmium	ND	0.00055	0.0020		mg/L	1	5/8/2019 9:25:15 PM	A59738
Calcium	18	0.062	1.0		mg/L	1	5/8/2019 9:25:15 PM	A59738
Chromium	ND	0.0015	0.0060		mg/L	1	5/8/2019 9:25:15 PM	A59738
Cobalt	ND	0.0031	0.0060		mg/L	1	5/8/2019 9:25:15 PM	A59738
Copper	0.0019	0.0013	0.0060	J	mg/L	1	5/8/2019 9:25:15 PM	A59738
Iron	ND	0.0087	0.020		mg/L	1	5/8/2019 9:25:15 PM	A59738
Magnesium	2.0	0.050	1.0		mg/L	1	5/8/2019 9:25:15 PM	A59738
Manganese	0.0023	0.00029	0.0020		mg/L	1	5/8/2019 9:25:15 PM	A59738
Molybdenum	0.013	0.0067	0.0080		mg/L	1	5/8/2019 9:25:15 PM	A59738
Nickel	ND	0.0040	0.010		mg/L	1	5/8/2019 9:25:15 PM	A59738
Potassium	1.5	0.16	1.0		mg/L	1	5/8/2019 9:25:15 PM	A59738
Silver	ND	0.00094	0.0050		mg/L	1	5/8/2019 9:25:15 PM	A59738
Sodium	660	4.2	10		mg/L	10	5/9/2019 6:24:17 PM	B59778
Zinc	0.042	0.0023	0.010		mg/L	1	5/9/2019 6:11:29 PM	B59778
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.96	0.012	0.10	*	mg/L	5	5/22/2019 7:28:51 PM	44984
Barium	0.10	0.00065	0.0020		mg/L	1	5/20/2019 10:08:00 PM	44984
Beryllium	0.00090	0.00028	0.0020	J	mg/L	1	5/20/2019 10:08:00 PM	44984
Boron	0.93	0.0045	0.040		mg/L	1	5/20/2019 10:08:00 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-41
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:30:00 AM
Lab ID: 1905364-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 10:08:00 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 10:08:00 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 10:08:00 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 10:08:00 PM	44984
Iron	0.73	0.0087	0.020	*	mg/L	1	5/20/2019 10:08:00 PM	44984
Manganese	0.028	0.00029	0.0020		mg/L	1	5/20/2019 10:08:00 PM	44984
Molybdenum	0.013	0.0067	0.0080		mg/L	1	5/20/2019 10:08:00 PM	44984
Nickel	ND	0.0040	0.010		mg/L	1	5/20/2019 10:08:00 PM	44984
Silver	0.0015	0.0014	0.0050	J	mg/L	1	5/20/2019 10:08:00 PM	44984
Zinc	ND	0.0058	0.010		mg/L	1	5/20/2019 10:08:00 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:39:05 PM	C59904
Arsenic	0.0011	0.00050	0.0050	J	mg/L	5	5/10/2019 5:21:36 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 5:21:36 PM	A59775
Selenium	0.036	0.00086	0.0050		mg/L	5	5/10/2019 5:21:36 PM	A59775
Thallium	ND	0.00024	0.0025		mg/L	5	5/10/2019 5:21:36 PM	A59775
Uranium	0.013	0.00037	0.0025		mg/L	5	5/10/2019 5:21:36 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.0011	0.00039	0.0010		mg/L	1	5/20/2019 4:47:48 PM	44984
Arsenic	0.0016	0.00031	0.0010		mg/L	1	5/20/2019 4:47:48 PM	44984
Lead	0.00076	0.000055	0.00050		mg/L	1	5/20/2019 4:47:48 PM	44984
Selenium	0.031	0.00048	0.0010		mg/L	1	5/20/2019 4:47:48 PM	44984
Thallium	ND	0.000052	0.00050		mg/L	1	5/20/2019 4:47:48 PM	44984
Uranium	0.015	0.000085	0.00050		mg/L	1	5/20/2019 4:47:48 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000069	0.000038	0.00020	J	mg/L	1	5/9/2019 12:44:12 PM	44813
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 4:34:26 PM	44850

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-41
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:30:00 AM
Lab ID: 1905364-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 4:34:26 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 4:34:26 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 4:34:26 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 4:34:26 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 4:34:26 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 4:34:26 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 4:34:26 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 4:34:26 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 4:34:26 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 4:34:26 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-41
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:30:00 AM
Lab ID: 1905364-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 4:34:26 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 4:34:26 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 4:34:26 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 4:34:26 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 4:34:26 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 4:34:26 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 4:34:26 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 4:34:26 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 4:34:26 PM	44850
Surr: 2-Fluorophenol	44.7	0	15-101		%Rec	1	5/14/2019 4:34:26 PM	44850
Surr: Phenol-d5	30.2	0	15-84.6		%Rec	1	5/14/2019 4:34:26 PM	44850
Surr: 2,4,6-Tribromophenol	59.5	0	27.8-112		%Rec	1	5/14/2019 4:34:26 PM	44850
Surr: Nitrobenzene-d5	62.1	0	33-113		%Rec	1	5/14/2019 4:34:26 PM	44850
Surr: 2-Fluorobiphenyl	48.6	0	26.6-107		%Rec	1	5/14/2019 4:34:26 PM	44850
Surr: 4-Terphenyl-d14	65.2	0	18.7-148		%Rec	1	5/14/2019 4:34:26 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Methyl tert-butyl ether (MTBE)	0.87	0.46	1.0	J	µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2,4-Trimethylbenzene	0.25	0.21	1.0	J	µg/L	1	5/14/2019 6:27:02 AM	B59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2-Dichloroethane (EDC)	2.5	0.19	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 6:27:02 AM	B59856

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
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RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-41
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:30:00 AM
Lab ID: 1905364-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Acetone	4.8	1.2	10	J	µg/L	1	5/14/2019 6:27:02 AM	B59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 6:27:02 AM	B59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 6:27:02 AM	B59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,1-Dichloroethane	3.0	0.14	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,1-Dichloroethene	4.0	0.21	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 6:27:02 AM	B59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 6:27:02 AM	B59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-41
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:30:00 AM
Lab ID: 1905364-005
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,1,2-Trichloroethane	0.51	0.22	1.0	J	µg/L	1	5/14/2019 6:27:02 AM	B59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 6:27:02 AM	B59856
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 6:27:02 AM	B59856
Surr: 1,2-Dichloroethane-d4	85.2	0	70-130		%Rec	1	5/14/2019 6:27:02 AM	B59856
Surr: 4-Bromofluorobenzene	91.0	0	70-130		%Rec	1	5/14/2019 6:27:02 AM	B59856
Surr: Dibromofluoromethane	96.7	0	70-130		%Rec	1	5/14/2019 6:27:02 AM	B59856
Surr: Toluene-d8	89.2	0	70-130		%Rec	1	5/14/2019 6:27:02 AM	B59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/14/2019 6:27:02 AM	G59856
Surr: BFB	97.1	0	70-130		%Rec	1	5/14/2019 6:27:02 AM	G59856

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:35:00 AM
Lab ID: 1905364-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	5/16/2019 2:50:24 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/9/2019 9:41:50 PM	44776
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/9/2019 9:41:50 PM	44776
Surr: DNOP	104	0	70-130		%Rec	1	5/9/2019 9:41:50 PM	44776
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.32	0.25	0.50	J	mg/L	5	5/8/2019 1:18:22 PM	R59744
Chloride	930	6.2	50	*	mg/L	100	5/10/2019 11:42:00 PM	R59816
Nitrogen, Nitrite (As N)	0.78	0.022	0.50		mg/L	5	5/8/2019 1:18:22 PM	R59744
Bromide	2.1	0.089	0.50		mg/L	5	5/8/2019 1:18:22 PM	R59744
Nitrogen, Nitrate (As N)	5.0	0.027	0.50		mg/L	5	5/8/2019 1:18:22 PM	R59744
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/8/2019 1:18:22 PM	R59744
Sulfate	61	0.27	2.5		mg/L	5	5/8/2019 1:18:22 PM	R59744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.015	0.0025	0.020	J	mg/L	1	5/8/2019 9:27:26 PM	A59738
Barium	0.068	0.00065	0.0020		mg/L	1	5/8/2019 9:27:26 PM	A59738
Beryllium	ND	0.00028	0.0020		mg/L	1	5/8/2019 9:27:26 PM	A59738
Boron	0.86	0.0045	0.040		mg/L	1	5/8/2019 9:27:26 PM	A59738
Cadmium	ND	0.00055	0.0020		mg/L	1	5/8/2019 9:27:26 PM	A59738
Calcium	16	0.062	1.0		mg/L	1	5/8/2019 9:27:26 PM	A59738
Chromium	ND	0.0015	0.0060		mg/L	1	5/8/2019 9:27:26 PM	A59738
Cobalt	ND	0.0031	0.0060		mg/L	1	5/8/2019 9:27:26 PM	A59738
Copper	ND	0.0013	0.0060		mg/L	1	5/8/2019 9:27:26 PM	A59738
Iron	ND	0.0087	0.020		mg/L	1	5/8/2019 9:27:26 PM	A59738
Magnesium	1.8	0.050	1.0		mg/L	1	5/8/2019 9:27:26 PM	A59738
Manganese	0.0032	0.00029	0.0020		mg/L	1	5/8/2019 9:27:26 PM	A59738
Molybdenum	0.013	0.0067	0.0080		mg/L	1	5/8/2019 9:27:26 PM	A59738
Nickel	ND	0.0040	0.010		mg/L	1	5/8/2019 9:27:26 PM	A59738
Potassium	1.4	0.16	1.0		mg/L	1	5/8/2019 9:27:26 PM	A59738
Silver	ND	0.00094	0.0050		mg/L	1	5/8/2019 9:27:26 PM	A59738
Sodium	670	4.2	10		mg/L	10	5/9/2019 6:26:27 PM	B59778
Zinc	0.018	0.0023	0.010		mg/L	1	5/14/2019 3:35:39 PM	B59865
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.88	0.012	0.10	*	mg/L	5	5/22/2019 7:30:54 PM	44984
Barium	0.10	0.00065	0.0020		mg/L	1	5/20/2019 10:12:13 PM	44984
Beryllium	0.00078	0.00028	0.0020	J	mg/L	1	5/20/2019 10:12:13 PM	44984
Boron	0.92	0.0045	0.040		mg/L	1	5/20/2019 10:12:13 PM	44984

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:35:00 AM
Lab ID: 1905364-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/20/2019 10:12:13 PM	44984
Chromium	ND	0.0015	0.0060		mg/L	1	5/20/2019 10:12:13 PM	44984
Cobalt	ND	0.0031	0.0060		mg/L	1	5/20/2019 10:12:13 PM	44984
Copper	ND	0.0041	0.0060		mg/L	1	5/20/2019 10:12:13 PM	44984
Iron	0.61	0.0087	0.020	*	mg/L	1	5/20/2019 10:12:13 PM	44984
Manganese	0.029	0.00029	0.0020		mg/L	1	5/20/2019 10:12:13 PM	44984
Molybdenum	0.013	0.0067	0.0080		mg/L	1	5/20/2019 10:12:13 PM	44984
Nickel	ND	0.0040	0.010		mg/L	1	5/20/2019 10:12:13 PM	44984
Silver	ND	0.0014	0.0050		mg/L	1	5/20/2019 10:12:13 PM	44984
Zinc	ND	0.0058	0.010		mg/L	1	5/20/2019 10:12:13 PM	44984
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:47:17 PM	C59904
Arsenic	0.0016	0.00050	0.0050	J	mg/L	5	5/10/2019 5:24:18 PM	A59775
Lead	ND	0.00027	0.0025		mg/L	5	5/10/2019 5:24:18 PM	A59775
Selenium	0.031	0.00086	0.0050		mg/L	5	5/10/2019 5:24:18 PM	A59775
Thallium	ND	0.00024	0.0025		mg/L	5	5/10/2019 5:24:18 PM	A59775
Uranium	0.012	0.00037	0.0025		mg/L	5	5/10/2019 5:24:18 PM	A59775
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00044	0.00039	0.0010	J	mg/L	1	5/20/2019 4:50:00 PM	44984
Arsenic	0.0018	0.00031	0.0010		mg/L	1	5/20/2019 4:50:00 PM	44984
Lead	0.00065	0.000055	0.00050		mg/L	1	5/20/2019 4:50:00 PM	44984
Selenium	0.032	0.00048	0.0010		mg/L	1	5/20/2019 4:50:00 PM	44984
Thallium	ND	0.000052	0.00050		mg/L	1	5/20/2019 4:50:00 PM	44984
Uranium	0.014	0.000085	0.00050		mg/L	1	5/20/2019 4:50:00 PM	44984
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000073	0.000038	0.00020	J	mg/L	1	5/9/2019 12:46:27 PM	44813
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 5:03:57 PM	44850

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Qualifiers:

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:35:00 AM
Lab ID: 1905364-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 5:03:57 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 5:03:57 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 5:03:57 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 5:03:57 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 5:03:57 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 5:03:57 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 5:03:57 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 5:03:57 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 5:03:57 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 5:03:57 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:35:00 AM
Lab ID: 1905364-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 5:03:57 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 5:03:57 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 5:03:57 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 5:03:57 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 5:03:57 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 5:03:57 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 5:03:57 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 5:03:57 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 5:03:57 PM	44850
Surr: 2-Fluorophenol	56.2	0	15-101		%Rec	1	5/14/2019 5:03:57 PM	44850
Surr: Phenol-d5	40.7	0	15-84.6		%Rec	1	5/14/2019 5:03:57 PM	44850
Surr: 2,4,6-Tribromophenol	75.8	0	27.8-112		%Rec	1	5/14/2019 5:03:57 PM	44850
Surr: Nitrobenzene-d5	78.9	0	33-113		%Rec	1	5/14/2019 5:03:57 PM	44850
Surr: 2-Fluorobiphenyl	60.1	0	26.6-107		%Rec	1	5/14/2019 5:03:57 PM	44850
Surr: 4-Terphenyl-d14	81.7	0	18.7-148		%Rec	1	5/14/2019 5:03:57 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Methyl tert-butyl ether (MTBE)	0.99	0.46	1.0	J	µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2,4-Trimethylbenzene	0.49	0.21	1.0	J	µg/L	1	5/14/2019 7:52:42 AM	B59856
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2-Dichloroethane (EDC)	2.6	0.19	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Naphthalene	0.62	0.28	2.0	J	µg/L	1	5/14/2019 7:52:42 AM	B59856
1-Methylnaphthalene	0.75	0.31	4.0	J	µg/L	1	5/14/2019 7:52:42 AM	B59856

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/7/2019 10:35:00 AM
Lab ID: 1905364-006
Matrix: AQUEOUS
Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	0.68	0.35	4.0	J	µg/L	1	5/14/2019 7:52:42 AM	B59856
Acetone	6.2	1.2	10	J	µg/L	1	5/14/2019 7:52:42 AM	B59856
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 7:52:42 AM	B59856
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 7:52:42 AM	B59856
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,1-Dichloroethane	3.2	0.14	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,1-Dichloroethene	5.4	0.21	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 7:52:42 AM	B59856
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 7:52:42 AM	B59856
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856

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Lab ID: 1905364-006
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Received Date: 5/7/2019 4:04:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,1,2-Trichloroethane	0.52	0.22	1.0	J	µg/L	1	5/14/2019 7:52:42 AM	B59856
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 7:52:42 AM	B59856
Xylenes, Total	0.53	0.45	1.5	J	µg/L	1	5/14/2019 7:52:42 AM	B59856
Surr: 1,2-Dichloroethane-d4	85.6	0	70-130		%Rec	1	5/14/2019 7:52:42 AM	B59856
Surr: 4-Bromofluorobenzene	88.6	0	70-130		%Rec	1	5/14/2019 7:52:42 AM	B59856
Surr: Dibromofluoromethane	98.0	0	70-130		%Rec	1	5/14/2019 7:52:42 AM	B59856
Surr: Toluene-d8	89.5	0	70-130		%Rec	1	5/14/2019 7:52:42 AM	B59856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/14/2019 7:52:42 AM	G59856
Surr: BFB	96.4	0	70-130		%Rec	1	5/14/2019 7:52:42 AM	G59856

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-44984** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **44984** RunNo: **60012**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0029	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-44984** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **44984** RunNo: **60012**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025329** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	127	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.6	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	99.6	50	150			J
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0019	0.0020	0.002000	0	95.6	50	150			J
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Cobalt	0.0062	0.0060	0.006000	0	104	50	150			
Iron	0.018	0.020	0.02000	0	88.2	50	150			J
Manganese	0.0022	0.0020	0.002000	0	111	50	150			
Molybdenum	0.010	0.0080	0.008000	0	125	50	150			
Nickel	0.0055	0.010	0.005000	0	109	50	150			J
Silver	0.0052	0.0050	0.005000	0	104	50	150			

Sample ID: **LCS-44984** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **44984** RunNo: **60012**
Prep Date: **5/16/2019** Analysis Date: **5/20/2019** SeqNo: **2025331** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Beryllium	0.51	0.0020	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-44984**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025331** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.9	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.50	0.020	0.5000	0	99.4	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Molybdenum	0.50	0.0080	0.5000	0	101	85	115			
Nickel	0.49	0.010	0.5000	0	97.2	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Sample ID: **LLLCS-44984**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025339** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0059	0.010	0.005000	0	118	50	150			J

Sample ID: **MB-44984**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID: **LLLCS-44984**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0061	0.0060	0.006000	0	101	50	150			

Sample ID: **LCS-44984**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **44984**	RunNo: **60012**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A59738**	RunNo: **59738**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014528** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A59738**	RunNo: **59738**
Prep Date:	Analysis Date: **5/8/2019**	SeqNo: **2014529** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	102	50	150			J
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.041	0.040	0.04000	0	102	50	150			
Cadmium	0.0021	0.0020	0.002000	0	103	50	150			
Calcium	0.54	1.0	0.5000	0	107	50	150			J
Chromium	0.0063	0.0060	0.006000	0	105	50	150			
Cobalt	0.0064	0.0060	0.006000	0	106	50	150			
Copper	0.0052	0.0060	0.006000	0	86.8	50	150			J
Iron	0.023	0.020	0.02000	0	116	50	150			
Magnesium	0.52	1.0	0.5000	0	105	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0089	0.0080	0.008000	0	112	50	150			
Nickel	0.0073	0.010	0.005000	0	147	50	150			J
Potassium	0.45	1.0	0.5000	0	90.5	50	150			J
Silver	0.0051	0.0050	0.005000	0	101	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A59738** RunNo: **59738**
Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014529** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0072	0.010	0.005000	0	143	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A59738** RunNo: **59738**
Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014530** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Barium	0.50	0.0020	0.5000	0	100	85	115			
Beryllium	0.52	0.0020	0.5000	0	103	85	115			
Boron	0.52	0.040	0.5000	0	105	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Cobalt	0.50	0.0060	0.5000	0	99.4	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Magnesium	51	1.0	50.00	0	103	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Molybdenum	0.52	0.0080	0.5000	0	104	85	115			
Nickel	0.50	0.010	0.5000	0	100	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B59778** RunNo: **59778**
Prep Date: Analysis Date: **5/9/2019** SeqNo: **2016020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B59778** RunNo: **59778**
Prep Date: Analysis Date: **5/9/2019** SeqNo: **2016021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.56	1.0	0.5000	0	112	50	150			J
Zinc	0.0055	0.010	0.005000	0	109	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B59778** RunNo: **59778**
Prep Date: Analysis Date: **5/9/2019** SeqNo: **2016022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	51	1.0	50.00	0	101	85	115			
Zinc	0.48	0.010	0.5000	0	96.8	85	115			

Sample ID: **1905364-005FMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-41** Batch ID: **B59778** RunNo: **59778**
Prep Date: Analysis Date: **5/9/2019** SeqNo: **2016028** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.53	0.010	0.5000	0.04188	98.2	70	130			

Sample ID: **1905364-005FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-41** Batch ID: **B59778** RunNo: **59778**
Prep Date: Analysis Date: **5/9/2019** SeqNo: **2016029** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.52	0.010	0.5000	0.04188	96.1	70	130	1.97	20	

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B59865** RunNo: **59865**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2019537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B59865** RunNo: **59865**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2019538** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0057	0.010	0.005000	0	114	50	150			J

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B59865** RunNo: **59865**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2019539** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0	97.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **1905364-006FMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Duplicate**	Batch ID: **B59865**	RunNo: **59865**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019739** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.52	0.010	0.5000	0.01848	101	70	130			

Sample ID: **1905364-006FMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Duplicate**	Batch ID: **B59865**	RunNo: **59865**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019740** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.53	0.010	0.5000	0.01848	101	70	130	0.817	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**

30-May-19

Client: Marathon

Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-44984**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **44984**	RunNo: **60024**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-44984**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **44984**	RunNo: **60024**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025946** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	91.7	50	150			J
Arsenic	0.00089	0.0010	0.001000	0	89.5	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.1	50	150			J
Selenium	0.0011	0.0010	0.001000	0	114	50	150			
Thallium	0.00044	0.00050	0.0005000	0	88.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.6	50	150			J

Sample ID: **MSLCS-44984**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **44984**	RunNo: **60024**
Prep Date: **5/16/2019**	Analysis Date: **5/20/2019**	SeqNo: **2025950** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	101	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.0	85	115			
Thallium	0.012	0.00050	0.01250	0	98.9	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **A59775** RunNo: **59775**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A59775** RunNo: **59775**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Lead	0.012	0.00050	0.01250	0	96.2	85	115			
Selenium	0.025	0.0010	0.02500	0	98.1	85	115			
Thallium	0.012	0.00050	0.01250	0	96.7	85	115			
Uranium	0.012	0.00050	0.01250	0	93.5	85	115			

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A59775** RunNo: **59775**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017126** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00094	0.0010	0.001000	0	93.8	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.2	50	150			J
Selenium	0.00088	0.0010	0.001000	0	87.7	50	150			J
Thallium	0.00029	0.00050	0.0005000	0	58.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.2	50	150			J

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021325** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C59904**	RunNo: **59904**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00084	0.0010	0.001000	0	83.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C59904**	RunNo: **59904**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-44813**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44813**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015277** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000052	0.00020								J

Sample ID: **LCS-44813**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44813**	RunNo: **59759**
Prep Date: **5/8/2019**	Analysis Date: **5/9/2019**	SeqNo: **2015278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59744** RunNo: **59744**
Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59744** RunNo: **59744**
Prep Date: Analysis Date: **5/8/2019** SeqNo: **2014834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.2	90	110			
Bromide	2.4	0.10	2.500	0	95.2	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	98.0	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.1	90	110			
Sulfate	9.2	0.50	10.00	0	91.6	90	110			

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59816** RunNo: **59816**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017466** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59816** RunNo: **59816**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017467** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.8	90	110			

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59858** RunNo: **59858**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2019161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R59858**	RunNo: **59858**							
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019162**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-44954**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44954**	RunNo: **59921**
Prep Date: **5/16/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-44954**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44954**	RunNo: **59921**
Prep Date: **5/16/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022237** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.084	0.010	0.1000	0	83.9	70	130			

Sample ID: **LCSD-44954**	SampType: **LCSD**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSS02**	Batch ID: **44954**	RunNo: **59921**
Prep Date: **5/16/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022238** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.088	0.010	0.1000	0	87.6	70	130	4.31	20	

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-44776** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **44776** RunNo: **59674**
Prep Date: **5/8/2019** Analysis Date: **5/8/2019** SeqNo: **2013806** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.9	1.0	5.000	0	118	71.8	135			
Surr: DNOP	0.54		0.5000		108	70	130			

Sample ID: **MB-44776** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW** Batch ID: **44776** RunNo: **59674**
Prep Date: **5/8/2019** Analysis Date: **5/8/2019** SeqNo: **2013807** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		108	70	130			

Sample ID: **1905364-006BMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **Duplicate** Batch ID: **44776** RunNo: **59732**
Prep Date: **5/8/2019** Analysis Date: **5/9/2019** SeqNo: **2015688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	113	68.1	137			
Surr: DNOP	0.51		0.5000		101	70	130			

Sample ID: **1905364-006BMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **Duplicate** Batch ID: **44776** RunNo: **59732**
Prep Date: **5/8/2019** Analysis Date: **5/9/2019** SeqNo: **2015689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	103	68.1	137	9.00	20	
Surr: DNOP	0.46		0.5000		91.9	70	130	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **B59856** RunNo: **59856**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2019090** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0	79.4	70	130			
Toluene	17	1.0	20.00	0	85.6	70	130			
Chlorobenzene	18	1.0	20.00	0	91.0	70	130			
1,1-Dichloroethene	14	1.0	20.00	0	70.4	70	130			
Trichloroethene (TCE)	15	1.0	20.00	0	75.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.2	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Sample ID: **rb2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **B59856** RunNo: **59856**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2019129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

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Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.9	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.4	70	130			
Surr: Toluene-d8	9.0		10.00		90.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **mb-44850**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44850**	RunNo: **59871**
Prep Date: **5/10/2019**	Analysis Date: **5/14/2019**	SeqNo: **2019766** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **mb-44850**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44850**	RunNo: **59871**
Prep Date: **5/10/2019**	Analysis Date: **5/14/2019**	SeqNo: **2019766** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.4	15	101			
Surr: Phenol-d5	71		200.0		35.3	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		59.2	27.8	112			
Surr: Nitrobenzene-d5	67		100.0		67.0	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		60.5	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		63.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **lcs-44850** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **44850** RunNo: **59871**
Prep Date: **5/10/2019** Analysis Date: **5/14/2019** SeqNo: **2019767** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	71.5	32.2	94			
4-Chloro-3-methylphenol	170	10	200.0	0	85.8	37.7	101			
2-Chlorophenol	160	10	200.0	0	77.8	32.6	90.1			
1,4-Dichlorobenzene	56	10	100.0	0	55.9	30	87.2			
2,4-Dinitrotoluene	66	10	100.0	0	66.2	35.9	85.8			
N-Nitrosodi-n-propylamine	85	10	100.0	0	84.7	37.1	108			
4-Nitrophenol	90	10	200.0	0	45.2	22.4	86.6			
Pentachlorophenol	110	20	200.0	0	55.8	31.6	91			
Phenol	95	10	200.0	0	47.4	21.7	84.9			
Pyrene	73	10	100.0	0	72.9	46.3	103			
1,2,4-Trichlorobenzene	65	10	100.0	0	65.2	30.2	88.3			
Surr: 2-Fluorophenol	94		200.0		47.0	15	101			
Surr: Phenol-d5	79		200.0		39.6	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		78.5	27.8	112			
Surr: Nitrobenzene-d5	69		100.0		69.1	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		59.5	26.6	107			
Surr: 4-Terphenyl-d14	79		100.0		79.5	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905364**
30-May-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019157** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.2	70	130			
Surr: BFB	9.9		10.00		99.1	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G59856**	RunNo: **59856**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2019158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.7		10.00		96.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905364** RcptNo: **1**

Received By: **Isaiah Ortiz** **5/7/2019 4:04:00 PM** I-OA

Completed By: **Leah Baca** **5/7/2019 4:51:14 PM** Leah Baca

Reviewed By: LB 5/7/19

Labeled by YC 5/7/19 JJC 5-8-19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ JJC 5-8-19 No ☑ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)

Adjusted? no

Checked by: JJC 5-8-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Yes			
2	5.3	Good	Yes			
3	5.2	Good	Yes			
4	3.2	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905364** RcptNo: **1**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
5	4.5	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush

Project Name:
2019 2ND QTR - MKTF WELLS

Project #:

Project Manager:
BRIAN MOORE

Sampler: CAJOHNSON1@MARATHONPETROLEUM.COM

On Ice: ☑ Yes ☐ No

Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905364	8260+MTBE	8015D(DRO/MRO/GRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	MAJOR CATIONS/ANIONS		METHOD 8011 - EDB								Air Bubbles (Y or N)
							Analysis Request															
5/7/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-001	X															
5/7/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	HCL	-002	X															
5/7/2019	905	AQUEOUS	MKTF-42	MISC	MISC	-003	X	X	X	X	X	X		X								
5/7/2019	940	AQUEOUS	MKTF-32	MISC	MISC	-004	X	X	2	X	X	X		X								
5/7/2019	1030	AQUEOUS	MKTF-41	MISC	MISC	-005	X	X	X	X	X	X		X								
5/7/2019	1035	AQUEOUS	DUPLICATE	MISC	MISC	-006	X	X	X	X	X	X		X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
~~3/8/2017~~ 5/7/19	1400		Geene Vigil	5/7/19	1405
Date:	Time:	Relinquished by:	Received by:	Date	Time
5-7-19	1606	Geene Vigil		5/7/19	1604

Remarks: 3.9°C - 0.1°C = 3.8°C; 3.3°C - 0.1°C = 3.2°C; 5.4°C - 0.1°C = 5.3°C; 4.6°C - 0.1°C = 4.5°C; 5.3°C - 0.1°C = 5.2°C

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 05, 2019

Brian Moore
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 2nd QTR MKTF Wells OrderNo.: 1905448

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/8/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 7:00:00 AM
Lab ID: 1905448-001 **Matrix:** AQUEOUS **Received Date:** 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Acetone	ND	1.2	10		µg/L	1	5/14/2019 5:48:19 PM	R59887
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 5:48:19 PM	R59887
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 5:48:19 PM	R59887
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 5:48:19 PM	R59887

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 7:00:00 AM
Lab ID: 1905448-001 **Matrix:** AQUEOUS **Received Date:** 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 5:48:19 PM	R59887
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 5:48:19 PM	R59887
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 5:48:19 PM	R59887
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 5:48:19 PM	R59887
Surr: 1,2-Dichloroethane-d4	86.4	0	70-130		%Rec	1	5/14/2019 5:48:19 PM	R59887
Surr: 4-Bromofluorobenzene	90.0	0	70-130		%Rec	1	5/14/2019 5:48:19 PM	R59887
Surr: Dibromofluoromethane	95.4	0	70-130		%Rec	1	5/14/2019 5:48:19 PM	R59887
Surr: Toluene-d8	91.2	0	70-130		%Rec	1	5/14/2019 5:48:19 PM	R59887

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date:
Lab ID: 1905448-002
Matrix: TRIP BLANK
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Acetone	ND	1.2	10		µg/L	1	5/14/2019 6:17:01 PM	R59887
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 6:17:01 PM	R59887
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 6:17:01 PM	R59887
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 6:17:01 PM	R59887

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date:
Lab ID: 1905448-002
Matrix: TRIP BLANK
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 6:17:01 PM	R59887
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 6:17:01 PM	R59887
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 6:17:01 PM	R59887
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 6:17:01 PM	R59887
Surr: 1,2-Dichloroethane-d4	85.2	0	70-130		%Rec	1	5/14/2019 6:17:01 PM	R59887
Surr: 4-Bromofluorobenzene	88.9	0	70-130		%Rec	1	5/14/2019 6:17:01 PM	R59887
Surr: Dibromofluoromethane	96.6	0	70-130		%Rec	1	5/14/2019 6:17:01 PM	R59887
Surr: Toluene-d8	89.2	0	70-130		%Rec	1	5/14/2019 6:17:01 PM	R59887

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-44
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 8:36:00 AM
Lab ID: 1905448-003
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/10/2019 4:02:09 PM	44821
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2019 4:02:09 PM	44821
Surr: DNOP	116	0	70-130		%Rec	1	5/10/2019 4:02:09 PM	44821
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.25	0.50		mg/L	5	5/9/2019 7:42:01 PM	R59789
Chloride	2400	12	100		mg/L	200	5/17/2019 11:19:53 AM	R59981
Nitrogen, Nitrite (As N)	ND	0.090	2.0		mg/L	20	5/9/2019 7:54:52 PM	R59789
Bromide	0.87	0.089	0.50		mg/L	5	5/9/2019 7:42:01 PM	R59789
Nitrogen, Nitrate (As N)	14	0.027	0.50	*	mg/L	5	5/9/2019 7:42:01 PM	R59789
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/9/2019 7:42:01 PM	R59789
Sulfate	72	0.27	2.5		mg/L	5	5/9/2019 7:42:01 PM	R59789
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/9/2019 8:25:20 PM	B59778
Barium	0.47	0.00065	0.0020		mg/L	1	5/9/2019 8:25:20 PM	B59778
Beryllium	ND	0.00028	0.0020		mg/L	1	5/9/2019 8:25:20 PM	B59778
Boron	2.1	0.023	0.20		mg/L	5	5/9/2019 8:27:33 PM	B59778
Cadmium	ND	0.00055	0.0020		mg/L	1	5/9/2019 8:25:20 PM	B59778
Calcium	98	0.062	1.0		mg/L	1	5/9/2019 8:25:20 PM	B59778
Chromium	0.015	0.0015	0.0060		mg/L	1	5/9/2019 8:25:20 PM	B59778
Cobalt	ND	0.0031	0.0060		mg/L	1	5/9/2019 8:25:20 PM	B59778
Copper	0.0037	0.0013	0.0060	J	mg/L	1	5/9/2019 8:25:20 PM	B59778
Iron	ND	0.0087	0.020		mg/L	1	5/9/2019 8:25:20 PM	B59778
Magnesium	7.3	0.050	1.0		mg/L	1	5/9/2019 8:25:20 PM	B59778
Manganese	0.00049	0.00029	0.0020	J	mg/L	1	5/9/2019 8:25:20 PM	B59778
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/9/2019 8:25:20 PM	B59778
Nickel	ND	0.0040	0.010		mg/L	1	5/9/2019 8:25:20 PM	B59778
Potassium	3.4	0.16	1.0		mg/L	1	5/9/2019 8:25:20 PM	B59778
Silver	0.0022	0.00094	0.0050	J	mg/L	1	5/14/2019 7:18:20 PM	B59865
Sodium	1600	8.3	20		mg/L	20	5/14/2019 7:20:38 PM	B59865
Zinc	0.0080	0.0023	0.010	J	mg/L	1	5/9/2019 8:25:20 PM	B59778
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.99	0.0025	0.020	*	mg/L	1	5/23/2019 8:52:12 PM	45086
Barium	0.50	0.00065	0.0020		mg/L	1	5/23/2019 8:52:12 PM	45086
Beryllium	ND	0.00028	0.0020		mg/L	1	5/23/2019 8:52:12 PM	45086
Boron	2.1	0.023	0.20		mg/L	5	5/23/2019 9:03:59 PM	45086
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 8:52:12 PM	45086
Chromium	0.016	0.0015	0.0060		mg/L	1	5/23/2019 8:52:12 PM	45086
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 8:52:12 PM	45086

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-44
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 8:36:00 AM
Lab ID: 1905448-003
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	0.0049	0.0041	0.0060	J	mg/L	1	5/23/2019 8:52:12 PM	45086
Iron	0.82	0.044	0.10	*	mg/L	5	5/24/2019 7:19:48 PM	45086
Manganese	0.024	0.00029	0.0020		mg/L	1	5/23/2019 8:52:12 PM	45086
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 8:52:12 PM	45086
Nickel	ND	0.0040	0.010		mg/L	1	5/23/2019 8:52:12 PM	45086
Silver	0.0017	0.0014	0.0050	J	mg/L	1	5/23/2019 8:52:12 PM	45086
Zinc	0.0059	0.0058	0.010	J	mg/L	1	5/23/2019 8:52:12 PM	45086
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:57:49 PM	D59904
Arsenic	0.0021	0.00050	0.0050	J	mg/L	5	5/15/2019 5:57:49 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:57:49 PM	D59904
Selenium	0.0085	0.00086	0.0050		mg/L	5	5/15/2019 5:57:49 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:57:49 PM	D59904
Uranium	0.11	0.00037	0.0025	*	mg/L	5	5/15/2019 5:57:49 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00083	0.00039	0.0010	J	mg/L	1	5/22/2019 1:28:36 PM	45086
Arsenic	0.0031	0.00031	0.0010		mg/L	1	5/22/2019 1:28:36 PM	45086
Lead	0.00097	0.000055	0.00050		mg/L	1	5/22/2019 1:28:36 PM	45086
Selenium	0.0089	0.00048	0.0010		mg/L	1	5/22/2019 1:28:36 PM	45086
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 1:28:36 PM	45086
Uranium	0.11	0.00085	0.0050	*	mg/L	10	5/22/2019 2:32:17 PM	45086
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/17/2019 12:37:26 PM	44988
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 5:33:49 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 5:33:49 PM	44850

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-44
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 8:36:00 AM
Lab ID: 1905448-003
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 5:33:49 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 5:33:49 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 5:33:49 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 5:33:49 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 5:33:49 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 5:33:49 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 5:33:49 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 5:33:49 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 5:33:49 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 5:33:49 PM	44850

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-44
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 8:36:00 AM
Lab ID: 1905448-003
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 5:33:49 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 5:33:49 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 5:33:49 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 5:33:49 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 5:33:49 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 5:33:49 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 5:33:49 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 5:33:49 PM	44850
Surr: 2-Fluorophenol	33.0	0	15-101		%Rec	1	5/14/2019 5:33:49 PM	44850
Surr: Phenol-d5	23.5	0	15-84.6		%Rec	1	5/14/2019 5:33:49 PM	44850
Surr: 2,4,6-Tribromophenol	52.2	0	27.8-112		%Rec	1	5/14/2019 5:33:49 PM	44850
Surr: Nitrobenzene-d5	45.7	0	33-113		%Rec	1	5/14/2019 5:33:49 PM	44850
Surr: 2-Fluorobiphenyl	32.9	0	26.6-107		%Rec	1	5/14/2019 5:33:49 PM	44850
Surr: 4-Terphenyl-d14	60.0	0	18.7-148		%Rec	1	5/14/2019 5:33:49 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Acetone	ND	1.2	10		µg/L	1	5/14/2019 6:45:38 PM	R59887
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-44
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 8:36:00 AM
Lab ID: 1905448-003
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 6:45:38 PM	R59887
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 6:45:38 PM	R59887
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 6:45:38 PM	R59887
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 6:45:38 PM	R59887
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-44
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 8:36:00 AM
Lab ID: 1905448-003
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 6:45:38 PM	R59887
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 6:45:38 PM	R59887
Surr: 1,2-Dichloroethane-d4	85.8	0	70-130		%Rec	1	5/14/2019 6:45:38 PM	R59887
Surr: 4-Bromofluorobenzene	91.5	0	70-130		%Rec	1	5/14/2019 6:45:38 PM	R59887
Surr: Dibromofluoromethane	95.9	0	70-130		%Rec	1	5/14/2019 6:45:38 PM	R59887
Surr: Toluene-d8	89.4	0	70-130		%Rec	1	5/14/2019 6:45:38 PM	R59887
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/14/2019 6:45:38 PM	G59887
Surr: BFB	96.6	0	70-130		%Rec	1	5/14/2019 6:45:38 PM	G59887

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-43
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 9:10:00 AM
Lab ID: 1905448-004
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/14/2019 1:55:39 AM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/10/2019 4:26:36 PM	44821
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2019 4:26:36 PM	44821
Surr: DNOP	133	0	70-130	S	%Rec	1	5/10/2019 4:26:36 PM	44821
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.31	0.25	0.50	J	mg/L	5	5/9/2019 8:07:44 PM	R59789
Chloride	3600	31	250		mg/L	500	5/17/2019 11:32:44 AM	R59981
Nitrogen, Nitrite (As N)	ND	0.090	2.0		mg/L	20	5/9/2019 8:20:36 PM	R59789
Bromide	1.6	0.089	0.50		mg/L	5	5/9/2019 8:07:44 PM	R59789
Nitrogen, Nitrate (As N)	19	0.027	0.50	*	mg/L	5	5/9/2019 8:07:44 PM	R59789
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/9/2019 8:07:44 PM	R59789
Sulfate	340	1.1	10		mg/L	20	5/9/2019 8:20:36 PM	R59789
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/9/2019 8:29:44 PM	B59778
Barium	0.10	0.00065	0.0020		mg/L	1	5/9/2019 8:29:44 PM	B59778
Beryllium	0.00056	0.00028	0.0020	J	mg/L	1	5/9/2019 8:29:44 PM	B59778
Boron	0.52	0.0045	0.040		mg/L	1	5/9/2019 8:29:44 PM	B59778
Cadmium	ND	0.00055	0.0020		mg/L	1	5/9/2019 8:29:44 PM	B59778
Calcium	580	1.2	20		mg/L	20	5/14/2019 7:25:04 PM	B59865
Chromium	ND	0.0015	0.0060		mg/L	1	5/9/2019 8:29:44 PM	B59778
Cobalt	ND	0.0031	0.0060		mg/L	1	5/9/2019 8:29:44 PM	B59778
Copper	0.0042	0.0013	0.0060	J	mg/L	1	5/9/2019 8:29:44 PM	B59778
Iron	ND	0.0087	0.020		mg/L	1	5/9/2019 8:29:44 PM	B59778
Magnesium	92	0.050	1.0		mg/L	1	5/9/2019 8:29:44 PM	B59778
Manganese	0.53	0.00029	0.0020	*	mg/L	1	5/9/2019 8:29:44 PM	B59778
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/9/2019 8:29:44 PM	B59778
Nickel	ND	0.0040	0.010		mg/L	1	5/9/2019 8:29:44 PM	B59778
Potassium	5.2	0.16	1.0		mg/L	1	5/9/2019 8:29:44 PM	B59778
Silver	0.011	0.00094	0.0050		mg/L	1	5/14/2019 7:22:42 PM	B59865
Sodium	1800	8.3	20		mg/L	20	5/14/2019 7:25:04 PM	B59865
Zinc	0.0086	0.0023	0.010	J	mg/L	1	5/9/2019 8:29:44 PM	B59778
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.5	0.012	0.10	*	mg/L	5	5/23/2019 9:08:10 PM	45086
Barium	0.12	0.00065	0.0020		mg/L	1	5/23/2019 9:06:07 PM	45086
Beryllium	0.00048	0.00028	0.0020	J	mg/L	1	5/23/2019 9:06:07 PM	45086
Boron	0.54	0.0045	0.040		mg/L	1	5/23/2019 9:06:07 PM	45086

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-43
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 9:10:00 AM
Lab ID: 1905448-004
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 9:06:07 PM	45086
Chromium	ND	0.0015	0.0060		mg/L	1	5/23/2019 9:06:07 PM	45086
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 9:06:07 PM	45086
Copper	0.0046	0.0041	0.0060	J	mg/L	1	5/23/2019 9:06:07 PM	45086
Iron	1.4	0.044	0.10	*	mg/L	5	5/24/2019 7:28:33 PM	45086
Manganese	0.71	0.00029	0.0020	*	mg/L	1	5/23/2019 9:06:07 PM	45086
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 9:06:07 PM	45086
Nickel	ND	0.0040	0.010		mg/L	1	5/23/2019 9:06:07 PM	45086
Silver	0.010	0.0014	0.0050		mg/L	1	5/23/2019 9:06:07 PM	45086
Zinc	ND	0.0058	0.010		mg/L	1	5/23/2019 9:06:07 PM	45086
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 6:00:32 PM	D59904
Arsenic	0.00073	0.00050	0.0050	J	mg/L	5	5/15/2019 6:00:32 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 6:00:32 PM	D59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 6:00:32 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 6:00:32 PM	D59904
Uranium	0.034	0.00037	0.0025	*	mg/L	5	5/15/2019 6:00:32 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/22/2019 2:34:28 PM	45086
Arsenic	0.0012	0.00031	0.0010		mg/L	1	5/22/2019 1:37:24 PM	45086
Lead	0.0013	0.000055	0.00050		mg/L	1	5/22/2019 1:37:24 PM	45086
Selenium	0.00098	0.00048	0.0010	J	mg/L	1	5/22/2019 1:37:24 PM	45086
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 1:37:24 PM	45086
Uranium	0.034	0.00042	0.0025	*	mg/L	5	5/22/2019 2:34:28 PM	45086
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/17/2019 12:39:48 PM	44988
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 6:03:40 PM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-43
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 9:10:00 AM
Lab ID: 1905448-004
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 6:03:40 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 6:03:40 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 6:03:40 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 6:03:40 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 6:03:40 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 6:03:40 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 6:03:40 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 6:03:40 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 6:03:40 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 6:03:40 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-43
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 9:10:00 AM
Lab ID: 1905448-004
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 6:03:40 PM	44850
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 6:03:40 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 6:03:40 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 6:03:40 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 6:03:40 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 6:03:40 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 6:03:40 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 6:03:40 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 6:03:40 PM	44850
Surr: 2-Fluorophenol	28.4	0	15-101		%Rec	1	5/14/2019 6:03:40 PM	44850
Surr: Phenol-d5	36.9	0	15-84.6		%Rec	1	5/14/2019 6:03:40 PM	44850
Surr: 2,4,6-Tribromophenol	24.4	0	27.8-112	S	%Rec	1	5/14/2019 6:03:40 PM	44850
Surr: Nitrobenzene-d5	72.1	0	33-113		%Rec	1	5/14/2019 6:03:40 PM	44850
Surr: 2-Fluorobiphenyl	50.0	0	26.6-107		%Rec	1	5/14/2019 6:03:40 PM	44850
Surr: 4-Terphenyl-d14	78.7	0	18.7-148		%Rec	1	5/14/2019 6:03:40 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 8:11:34 PM	R59887

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-43
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 9:10:00 AM
Lab ID: 1905448-004
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Acetone	ND	1.2	10		µg/L	1	5/14/2019 8:11:34 PM	R59887
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 8:11:34 PM	R59887
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 8:11:34 PM	R59887
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Chloroform	0.47	0.12	1.0	J	µg/L	1	5/14/2019 8:11:34 PM	R59887
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 8:11:34 PM	R59887
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 8:11:34 PM	R59887
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-43
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 9:10:00 AM
Lab ID: 1905448-004
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 8:11:34 PM	R59887
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 8:11:34 PM	R59887
Surr: 1,2-Dichloroethane-d4	84.3	0	70-130		%Rec	1	5/14/2019 8:11:34 PM	R59887
Surr: 4-Bromofluorobenzene	89.5	0	70-130		%Rec	1	5/14/2019 8:11:34 PM	R59887
Surr: Dibromofluoromethane	97.2	0	70-130		%Rec	1	5/14/2019 8:11:34 PM	R59887
Surr: Toluene-d8	90.0	0	70-130		%Rec	1	5/14/2019 8:11:34 PM	R59887
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/14/2019 8:11:34 PM	G59887
Surr: BFB	98.8	0	70-130		%Rec	1	5/14/2019 8:11:34 PM	G59887

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1-NW
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 10:20:00 AM
Lab ID: 1905448-005
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/10/2019 4:50:52 PM	44821
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2019 4:50:52 PM	44821
Surr: DNOP	119	0	70-130		%Rec	1	5/10/2019 4:50:52 PM	44821
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.25	0.50		mg/L	5	5/9/2019 8:59:18 PM	R59789
Chloride	2300	12	100		mg/L	200	5/17/2019 11:45:35 AM	R59981
Nitrogen, Nitrite (As N)	ND	0.090	2.0		mg/L	20	5/9/2019 9:12:10 PM	R59789
Bromide	3.5	0.089	0.50		mg/L	5	5/9/2019 8:59:18 PM	R59789
Nitrogen, Nitrate (As N)	27	0.027	0.50	*	mg/L	5	5/9/2019 8:59:18 PM	R59789
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/9/2019 8:59:18 PM	R59789
Sulfate	190	0.27	2.5		mg/L	5	5/9/2019 8:59:18 PM	R59789
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/9/2019 8:34:20 PM	B59778
Barium	0.11	0.00065	0.0020		mg/L	1	5/9/2019 8:34:20 PM	B59778
Beryllium	ND	0.00028	0.0020		mg/L	1	5/9/2019 8:34:20 PM	B59778
Boron	2.3	0.023	0.20		mg/L	5	5/9/2019 8:36:33 PM	B59778
Cadmium	ND	0.00055	0.0020		mg/L	1	5/9/2019 8:34:20 PM	B59778
Calcium	110	0.31	5.0		mg/L	5	5/9/2019 8:36:33 PM	B59778
Chromium	ND	0.0015	0.0060		mg/L	1	5/9/2019 8:34:20 PM	B59778
Cobalt	ND	0.0031	0.0060		mg/L	1	5/9/2019 8:34:20 PM	B59778
Copper	0.0029	0.0013	0.0060	J	mg/L	1	5/9/2019 8:34:20 PM	B59778
Iron	0.033	0.0087	0.020		mg/L	1	5/9/2019 8:34:20 PM	B59778
Magnesium	14	0.050	1.0		mg/L	1	5/9/2019 8:34:20 PM	B59778
Manganese	0.00036	0.00029	0.0020	J	mg/L	1	5/9/2019 8:34:20 PM	B59778
Molybdenum	0.017	0.0067	0.0080		mg/L	1	5/9/2019 8:34:20 PM	B59778
Nickel	ND	0.0040	0.010		mg/L	1	5/9/2019 8:34:20 PM	B59778
Potassium	5.0	0.16	1.0		mg/L	1	5/9/2019 8:34:20 PM	B59778
Silver	0.0024	0.00094	0.0050	J	mg/L	1	5/14/2019 7:27:26 PM	B59865
Sodium	1500	8.3	20		mg/L	20	5/14/2019 7:36:13 PM	B59865
Zinc	0.012	0.0023	0.010		mg/L	1	5/14/2019 7:27:26 PM	B59865
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.96	0.0025	0.020	*	mg/L	1	5/23/2019 9:10:33 PM	45086
Barium	0.13	0.00065	0.0020		mg/L	1	5/23/2019 9:10:33 PM	45086
Beryllium	ND	0.00028	0.0020		mg/L	1	5/23/2019 9:10:33 PM	45086
Boron	2.3	0.023	0.20		mg/L	5	5/23/2019 9:12:43 PM	45086
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 9:10:33 PM	45086
Chromium	ND	0.0015	0.0060		mg/L	1	5/23/2019 9:10:33 PM	45086
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 9:10:33 PM	45086

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1-NW
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 10:20:00 AM
Lab ID: 1905448-005
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/23/2019 9:10:33 PM	45086
Iron	0.57	0.0087	0.020	*	mg/L	1	5/24/2019 7:31:01 PM	45086
Manganese	0.015	0.00029	0.0020		mg/L	1	5/23/2019 9:10:33 PM	45086
Molybdenum	0.019	0.0067	0.0080		mg/L	1	5/23/2019 9:10:33 PM	45086
Nickel	ND	0.0040	0.010		mg/L	1	5/23/2019 9:10:33 PM	45086
Silver	0.0024	0.0014	0.0050	J	mg/L	1	5/23/2019 9:10:33 PM	45086
Zinc	0.0088	0.0058	0.010	J	mg/L	1	5/24/2019 7:31:01 PM	45086
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 6:03:15 PM	D59904
Arsenic	0.0021	0.00050	0.0050	J	mg/L	5	5/15/2019 6:03:15 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 6:03:15 PM	D59904
Selenium	0.0050	0.00086	0.0050		mg/L	5	5/15/2019 6:03:15 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 6:03:15 PM	D59904
Uranium	0.034	0.00037	0.0025	*	mg/L	5	5/15/2019 6:03:15 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/22/2019 1:39:36 PM	45086
Arsenic	0.0022	0.00031	0.0010		mg/L	1	5/22/2019 1:39:36 PM	45086
Lead	0.00049	0.000055	0.00050	J	mg/L	1	5/22/2019 1:39:36 PM	45086
Selenium	0.0053	0.00048	0.0010		mg/L	1	5/22/2019 1:39:36 PM	45086
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 1:39:36 PM	45086
Uranium	0.033	0.00042	0.0025	*	mg/L	5	5/22/2019 2:36:40 PM	45086
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/17/2019 12:42:05 PM	44988
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Acenaphthylene	ND	2.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Aniline	ND	3.6	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Anthracene	ND	2.7	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Azobenzene	ND	3.3	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Benzoic acid	ND	11	20		µg/L	1	5/14/2019 6:33:44 PM	44850
Benzyl alcohol	ND	2.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/14/2019 6:33:44 PM	44850

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1-NW
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 10:20:00 AM
Lab ID: 1905448-005
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/14/2019 6:33:44 PM	44850
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Carbazole	ND	2.9	10		µg/L	1	5/14/2019 6:33:44 PM	44850
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
4-Chloroaniline	ND	2.3	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2-Chlorophenol	ND	2.7	10		µg/L	1	5/14/2019 6:33:44 PM	44850
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Chrysene	ND	2.8	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Dibenzofuran	ND	3.2	10		µg/L	1	5/14/2019 6:33:44 PM	44850
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/14/2019 6:33:44 PM	44850
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/14/2019 6:33:44 PM	44850
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Diethyl phthalate	ND	2.9	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/14/2019 6:33:44 PM	44850
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/14/2019 6:33:44 PM	44850
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/14/2019 6:33:44 PM	44850
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Fluoranthene	ND	2.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Fluorene	ND	2.9	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Hexachloroethane	ND	4.8	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Isophorone	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2-Methylphenol	ND	2.9	10		µg/L	1	5/14/2019 6:33:44 PM	44850

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1-NW
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 10:20:00 AM
Lab ID: 1905448-005
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/14/2019 6:33:44 PM	44850
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/14/2019 6:33:44 PM	44850
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Naphthalene	ND	4.1	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 6:33:44 PM	44850
3-Nitroaniline	ND	3.2	10		µg/L	1	5/14/2019 6:33:44 PM	44850
4-Nitroaniline	ND	2.7	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Nitrobenzene	ND	2.8	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2-Nitrophenol	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
4-Nitrophenol	ND	7.6	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Pentachlorophenol	ND	2.7	20		µg/L	1	5/14/2019 6:33:44 PM	44850
Phenanthrene	ND	2.8	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Phenol	ND	8.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Pyrene	ND	2.5	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Pyridine	ND	9.6	10		µg/L	1	5/14/2019 6:33:44 PM	44850
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/14/2019 6:33:44 PM	44850
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/14/2019 6:33:44 PM	44850
Surr: 2-Fluorophenol	29.8	0	15-101		%Rec	1	5/14/2019 6:33:44 PM	44850
Surr: Phenol-d5	26.9	0	15-84.6		%Rec	1	5/14/2019 6:33:44 PM	44850
Surr: 2,4,6-Tribromophenol	36.1	0	27.8-112		%Rec	1	5/14/2019 6:33:44 PM	44850
Surr: Nitrobenzene-d5	57.1	0	33-113		%Rec	1	5/14/2019 6:33:44 PM	44850
Surr: 2-Fluorobiphenyl	43.3	0	26.6-107		%Rec	1	5/14/2019 6:33:44 PM	44850
Surr: 4-Terphenyl-d14	54.6	0	18.7-148		%Rec	1	5/14/2019 6:33:44 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Toluene	ND	0.35	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Naphthalene	ND	0.28	2.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Acetone	ND	1.2	10		µg/L	1	5/14/2019 9:37:22 PM	R59887
Bromobenzene	ND	0.24	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1-NW
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 10:20:00 AM
Lab ID: 1905448-005
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Bromoform	ND	0.29	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Bromomethane	ND	0.27	3.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
2-Butanone	ND	2.1	10		µg/L	1	5/14/2019 9:37:22 PM	R59887
Carbon disulfide	ND	0.45	10		µg/L	1	5/14/2019 9:37:22 PM	R59887
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Chloroethane	ND	0.18	2.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Chloroform	ND	0.12	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Chloromethane	ND	0.32	3.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Dibromomethane	ND	0.21	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
2-Hexanone	ND	1.5	10		µg/L	1	5/14/2019 9:37:22 PM	R59887
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2019 9:37:22 PM	R59887
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Styrene	ND	0.19	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1-NW
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 10:20:00 AM
Lab ID: 1905448-005
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2019 9:37:22 PM	R59887
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/14/2019 9:37:22 PM	R59887
Surr: 1,2-Dichloroethane-d4	86.1	0	70-130		%Rec	1	5/14/2019 9:37:22 PM	R59887
Surr: 4-Bromofluorobenzene	89.4	0	70-130		%Rec	1	5/14/2019 9:37:22 PM	R59887
Surr: Dibromofluoromethane	96.2	0	70-130		%Rec	1	5/14/2019 9:37:22 PM	R59887
Surr: Toluene-d8	88.7	0	70-130		%Rec	1	5/14/2019 9:37:22 PM	R59887
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/14/2019 9:37:22 PM	G59887
Surr: BFB	95.5	0	70-130		%Rec	1	5/14/2019 9:37:22 PM	G59887

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OAPIS-1
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:15:00 AM
Lab ID: 1905448-006
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	5/14/2019 2:10:45 AM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	11	0.35	1.0		mg/L	1	5/10/2019 5:15:13 PM	44821
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2019 5:15:13 PM	44821
Surr: DNOP	125	0	70-130		%Rec	1	5/10/2019 5:15:13 PM	44821
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	1.6	0.25	0.50		mg/L	5	5/9/2019 9:25:01 PM	R59789
Chloride	1600	6.2	50		mg/L	100	5/17/2019 11:58:27 AM	R59981
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/9/2019 9:25:01 PM	R59789
Bromide	3.8	0.089	0.50		mg/L	5	5/9/2019 9:25:01 PM	R59789
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/9/2019 9:25:01 PM	R59789
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/9/2019 9:25:01 PM	R59789
Sulfate	8.5	0.27	2.5		mg/L	5	5/9/2019 9:25:01 PM	R59789
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/14/2019 7:38:19 PM	B59865
Barium	1.1	0.0032	0.010		mg/L	5	5/9/2019 8:47:07 PM	B59778
Beryllium	0.00037	0.00028	0.0020	J	mg/L	1	5/14/2019 7:38:19 PM	B59865
Boron	1.4	0.023	0.20		mg/L	5	5/9/2019 8:47:07 PM	B59778
Cadmium	ND	0.00055	0.0020		mg/L	1	5/14/2019 7:38:19 PM	B59865
Calcium	160	0.31	5.0		mg/L	5	5/9/2019 8:47:07 PM	B59778
Chromium	ND	0.0015	0.0060		mg/L	1	5/14/2019 7:38:19 PM	B59865
Cobalt	0.0042	0.0031	0.0060	J	mg/L	1	5/14/2019 7:38:19 PM	B59865
Copper	ND	0.0013	0.0060		mg/L	1	5/14/2019 7:38:19 PM	B59865
Iron	5.2	0.087	0.20	*	mg/L	10	5/9/2019 8:49:13 PM	B59778
Magnesium	31	0.050	1.0		mg/L	1	5/14/2019 7:38:19 PM	B59865
Manganese	1.8	0.0014	0.010	*	mg/L	5	5/9/2019 8:47:07 PM	B59778
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/14/2019 7:38:19 PM	B59865
Nickel	0.17	0.0040	0.010	*	mg/L	1	5/14/2019 7:38:19 PM	B59865
Potassium	3.1	0.16	1.0		mg/L	1	5/14/2019 7:38:19 PM	B59865
Silver	0.0029	0.00094	0.0050	J	mg/L	1	5/14/2019 7:38:19 PM	B59865
Sodium	1200	8.3	20		mg/L	20	5/14/2019 7:40:22 PM	B59865
Zinc	0.012	0.0023	0.010		mg/L	1	5/14/2019 7:38:19 PM	B59865
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.23	0.0025	0.020	*	mg/L	1	5/23/2019 9:14:49 PM	45086
Barium	1.1	0.0032	0.010		mg/L	5	5/23/2019 9:16:50 PM	45086
Beryllium	ND	0.00028	0.0020		mg/L	1	5/23/2019 9:14:49 PM	45086
Boron	1.5	0.023	0.20		mg/L	5	5/23/2019 9:16:50 PM	45086

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EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 9:14:49 PM	45086
Chromium	ND	0.0015	0.0060		mg/L	1	5/23/2019 9:14:49 PM	45086
Cobalt	0.0031	0.0031	0.0060	J	mg/L	1	5/23/2019 9:14:49 PM	45086
Copper	ND	0.0041	0.0060		mg/L	1	5/23/2019 9:14:49 PM	45086
Iron	4.6	0.087	0.20	*	mg/L	10	5/24/2019 7:33:14 PM	45086
Manganese	1.8	0.0014	0.010	*	mg/L	5	5/23/2019 9:16:50 PM	45086
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 9:14:49 PM	45086
Nickel	0.17	0.0040	0.010	*	mg/L	1	5/23/2019 9:14:49 PM	45086
Silver	0.0029	0.0014	0.0050	J	mg/L	1	5/23/2019 9:14:49 PM	45086
Zinc	0.0093	0.0058	0.010	J	mg/L	1	5/23/2019 9:14:49 PM	45086
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 6:05:57 PM	D59904
Arsenic	0.0068	0.00050	0.0050		mg/L	5	5/15/2019 6:05:57 PM	D59904
Lead	0.0014	0.00027	0.0025	J	mg/L	5	5/15/2019 6:05:57 PM	D59904
Selenium	0.0016	0.00086	0.0050	J	mg/L	5	5/15/2019 6:05:57 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 6:05:57 PM	D59904
Uranium	0.016	0.00037	0.0025		mg/L	5	5/15/2019 6:05:57 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00058	0.00039	0.0010	J	mg/L	1	5/22/2019 1:41:47 PM	45086
Arsenic	0.0080	0.00031	0.0010		mg/L	1	5/22/2019 1:41:47 PM	45086
Lead	0.0020	0.000055	0.00050		mg/L	1	5/22/2019 1:41:47 PM	45086
Selenium	0.0019	0.00048	0.0010		mg/L	1	5/22/2019 1:41:47 PM	45086
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 1:41:47 PM	45086
Uranium	0.015	0.000085	0.00050		mg/L	1	5/22/2019 1:41:47 PM	45086
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/17/2019 12:44:23 PM	44988
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Acenaphthylene	ND	12	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Aniline	ND	18	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Anthracene	ND	13	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Azobenzene	ND	16	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Benz(a)anthracene	ND	18	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Benzo(a)pyrene	ND	18	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850

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EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	54	100		µg/L	1	5/14/2019 7:03:59 PM	44850
Benzyl alcohol	ND	12	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Bis(2-ethylhexyl)phthalate	31	22	50	J	µg/L	1	5/14/2019 7:03:59 PM	44850
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Carbazole	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/14/2019 7:03:59 PM	44850
4-Chloroaniline	ND	11	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2-Chloronaphthalene	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2-Chlorophenol	ND	13	50		µg/L	1	5/14/2019 7:03:59 PM	44850
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Chrysene	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Dibenzofuran	ND	16	50		µg/L	1	5/14/2019 7:03:59 PM	44850
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/14/2019 7:03:59 PM	44850
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/14/2019 7:03:59 PM	44850
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/14/2019 7:03:59 PM	44850
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Diethyl phthalate	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Dimethyl phthalate	ND	16	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/14/2019 7:03:59 PM	44850
2,4-Dimethylphenol	27	15	50	J	µg/L	1	5/14/2019 7:03:59 PM	44850
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/14/2019 7:03:59 PM	44850
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/14/2019 7:03:59 PM	44850
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Fluoranthene	ND	12	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Fluorene	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Hexachlorobenzene	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Hexachlorobutadiene	ND	24	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Hexachloroethane	ND	24	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Isophorone	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	30	15	50	J	µg/L	1	5/14/2019 7:03:59 PM	44850
2-Methylnaphthalene	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2-Methylphenol	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
3+4-Methylphenol	ND	18	50		µg/L	1	5/14/2019 7:03:59 PM	44850
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/14/2019 7:03:59 PM	44850
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/14/2019 7:03:59 PM	44850
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Naphthalene	ND	21	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2-Nitroaniline	ND	16	50		µg/L	1	5/14/2019 7:03:59 PM	44850
3-Nitroaniline	ND	16	50		µg/L	1	5/14/2019 7:03:59 PM	44850
4-Nitroaniline	ND	13	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Nitrobenzene	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2-Nitrophenol	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
4-Nitrophenol	ND	38	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Pentachlorophenol	ND	14	100		µg/L	1	5/14/2019 7:03:59 PM	44850
Phenanthrene	ND	14	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Phenol	ND	40	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Pyrene	ND	13	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Pyridine	ND	48	50		µg/L	1	5/14/2019 7:03:59 PM	44850
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/14/2019 7:03:59 PM	44850
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/14/2019 7:03:59 PM	44850
Surr: 2-Fluorophenol	53.0	0	15-101		%Rec	1	5/14/2019 7:03:59 PM	44850
Surr: Phenol-d5	39.5	0	15-84.6		%Rec	1	5/14/2019 7:03:59 PM	44850
Surr: 2,4,6-Tribromophenol	73.2	0	27.8-112		%Rec	1	5/14/2019 7:03:59 PM	44850
Surr: Nitrobenzene-d5	81.5	0	33-113		%Rec	1	5/14/2019 7:03:59 PM	44850
Surr: 2-Fluorobiphenyl	60.0	0	26.6-107		%Rec	1	5/14/2019 7:03:59 PM	44850
Surr: 4-Terphenyl-d14	84.0	0	18.7-148		%Rec	1	5/14/2019 7:03:59 PM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	110	0.33	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Toluene	0.95	0.70	2.0	J	µg/L	2	5/14/2019 10:05:57 PM	R59887
Ethylbenzene	14	0.26	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Methyl tert-butyl ether (MTBE)	250	0.91	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2,4-Trimethylbenzene	5.4	0.43	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,3,5-Trimethylbenzene	ND	0.38	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2-Dichloroethane (EDC)	ND	0.39	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Naphthalene	4.5	0.55	4.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1-Methylnaphthalene	54	0.63	8.0		µg/L	2	5/14/2019 10:05:57 PM	R59887

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.69	8.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Acetone	ND	2.4	20		µg/L	2	5/14/2019 10:05:57 PM	R59887
Bromobenzene	ND	0.49	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Bromodichloromethane	ND	0.27	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Bromoform	ND	0.58	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Bromomethane	ND	0.55	6.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
2-Butanone	ND	4.2	20		µg/L	2	5/14/2019 10:05:57 PM	R59887
Carbon disulfide	ND	0.91	20		µg/L	2	5/14/2019 10:05:57 PM	R59887
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Chlorobenzene	ND	0.39	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Chloroethane	ND	0.36	4.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Chloroform	ND	0.24	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Chloromethane	ND	0.64	6.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
cis-1,2-DCE	ND	0.38	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Dibromochloromethane	ND	0.48	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Dibromomethane	ND	0.42	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,1-Dichloroethane	1.1	0.28	2.0	J	µg/L	2	5/14/2019 10:05:57 PM	R59887
1,1-Dichloroethene	ND	0.41	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
2-Hexanone	ND	3.1	20		µg/L	2	5/14/2019 10:05:57 PM	R59887
Isopropylbenzene	1.3	0.38	2.0	J	µg/L	2	5/14/2019 10:05:57 PM	R59887
4-Isopropyltoluene	0.53	0.43	2.0	J	µg/L	2	5/14/2019 10:05:57 PM	R59887
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	5/14/2019 10:05:57 PM	R59887
Methylene Chloride	ND	0.31	6.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
n-Butylbenzene	ND	0.46	6.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
n-Propylbenzene	1.5	0.43	2.0	J	µg/L	2	5/14/2019 10:05:57 PM	R59887
sec-Butylbenzene	ND	0.50	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OAPIS-1
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:15:00 AM
Lab ID: 1905448-006
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.38	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
tert-Butylbenzene	ND	0.41	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,1,2-Trichloroethane	ND	0.43	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Trichloroethene (TCE)	ND	0.33	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Vinyl chloride	ND	0.36	2.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Xylenes, Total	6.5	0.91	3.0		µg/L	2	5/14/2019 10:05:57 PM	R59887
Surr: 1,2-Dichloroethane-d4	86.9	0	70-130		%Rec	2	5/14/2019 10:05:57 PM	R59887
Surr: 4-Bromofluorobenzene	93.2	0	70-130		%Rec	2	5/14/2019 10:05:57 PM	R59887
Surr: Dibromofluoromethane	95.8	0	70-130		%Rec	2	5/14/2019 10:05:57 PM	R59887
Surr: Toluene-d8	89.2	0	70-130		%Rec	2	5/14/2019 10:05:57 PM	R59887
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.76	0.061	0.10		mg/L	2	5/14/2019 10:05:57 PM	G59887
Surr: BFB	99.5	0	70-130		%Rec	2	5/14/2019 10:05:57 PM	G59887

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:20:00 AM
Lab ID: 1905448-007
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0092		µg/L	1	5/14/2019 2:25:47 AM	44861
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	13	0.35	1.0		mg/L	1	5/10/2019 5:39:26 PM	44821
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2019 5:39:26 PM	44821
Surr: DNOP	13.7	0	70-130	S	%Rec	1	5/10/2019 5:39:26 PM	44821
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	1.7	0.25	0.50		mg/L	5	5/9/2019 9:50:45 PM	R59789
Chloride	1600	6.2	50		mg/L	100	5/17/2019 12:11:19 PM	R59981
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/9/2019 9:50:45 PM	R59789
Bromide	3.8	0.089	0.50		mg/L	5	5/9/2019 9:50:45 PM	R59789
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/9/2019 9:50:45 PM	R59789
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/9/2019 9:50:45 PM	R59789
Sulfate	8.2	0.27	2.5		mg/L	5	5/9/2019 9:50:45 PM	R59789
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/14/2019 7:42:39 PM	B59865
Barium	1.1	0.0032	0.010		mg/L	5	5/9/2019 8:51:27 PM	B59778
Beryllium	0.00052	0.00028	0.0020	J	mg/L	1	5/14/2019 7:42:39 PM	B59865
Boron	1.5	0.023	0.20		mg/L	5	5/9/2019 8:51:27 PM	B59778
Cadmium	ND	0.00055	0.0020		mg/L	1	5/14/2019 7:42:39 PM	B59865
Calcium	160	0.31	5.0		mg/L	5	5/9/2019 8:51:27 PM	B59778
Chromium	ND	0.0015	0.0060		mg/L	1	5/14/2019 7:42:39 PM	B59865
Cobalt	0.0036	0.0031	0.0060	J	mg/L	1	5/14/2019 7:42:39 PM	B59865
Copper	ND	0.0013	0.0060		mg/L	1	5/14/2019 7:42:39 PM	B59865
Iron	5.3	0.087	0.20	*	mg/L	10	5/9/2019 8:53:30 PM	B59778
Magnesium	30	0.050	1.0		mg/L	1	5/14/2019 7:42:39 PM	B59865
Manganese	1.8	0.0014	0.010	*	mg/L	5	5/9/2019 8:51:27 PM	B59778
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/14/2019 7:42:39 PM	B59865
Nickel	0.17	0.0040	0.010	*	mg/L	1	5/14/2019 7:42:39 PM	B59865
Potassium	3.1	0.16	1.0		mg/L	1	5/14/2019 7:42:39 PM	B59865
Silver	0.0030	0.00094	0.0050	J	mg/L	1	5/14/2019 7:42:39 PM	B59865
Sodium	1200	8.3	20		mg/L	20	5/14/2019 7:44:43 PM	B59865
Zinc	0.010	0.0023	0.010		mg/L	1	5/14/2019 7:42:39 PM	B59865
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.26	0.0025	0.020	*	mg/L	1	5/23/2019 9:21:02 PM	45086
Barium	1.0	0.0032	0.010		mg/L	5	5/24/2019 7:35:27 PM	45086
Beryllium	ND	0.00028	0.0020		mg/L	1	5/23/2019 9:21:02 PM	45086
Boron	1.4	0.023	0.20		mg/L	5	5/24/2019 7:35:27 PM	45086

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:20:00 AM
Lab ID: 1905448-007
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 9:21:02 PM	45086
Chromium	ND	0.0015	0.0060		mg/L	1	5/23/2019 9:21:02 PM	45086
Cobalt	0.0040	0.0031	0.0060	J	mg/L	1	5/23/2019 9:21:02 PM	45086
Copper	ND	0.0041	0.0060		mg/L	1	5/23/2019 9:21:02 PM	45086
Iron	4.8	0.044	0.10	*	mg/L	5	5/24/2019 7:35:27 PM	45086
Manganese	1.6	0.0014	0.010	*	mg/L	5	5/24/2019 7:35:27 PM	45086
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 9:21:02 PM	45086
Nickel	0.18	0.0040	0.010	*	mg/L	1	5/23/2019 9:21:02 PM	45086
Silver	0.0026	0.0014	0.0050	J	mg/L	1	5/23/2019 9:21:02 PM	45086
Zinc	0.0072	0.0058	0.010	J	mg/L	1	5/23/2019 9:21:02 PM	45086
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 6:08:40 PM	D59904
Arsenic	0.0073	0.00050	0.0050		mg/L	5	5/15/2019 6:08:40 PM	D59904
Lead	0.0012	0.00027	0.0025	J	mg/L	5	5/15/2019 6:08:40 PM	D59904
Selenium	0.0010	0.00086	0.0050	J	mg/L	5	5/15/2019 6:08:40 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 6:08:40 PM	D59904
Uranium	0.015	0.00037	0.0025		mg/L	5	5/15/2019 6:08:40 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00043	0.00039	0.0010	J	mg/L	1	5/22/2019 1:43:59 PM	45086
Arsenic	0.0078	0.00031	0.0010		mg/L	1	5/22/2019 1:43:59 PM	45086
Lead	0.0020	0.000055	0.00050		mg/L	1	5/22/2019 1:43:59 PM	45086
Selenium	0.0012	0.00048	0.0010		mg/L	1	5/22/2019 1:43:59 PM	45086
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 1:43:59 PM	45086
Uranium	0.015	0.000085	0.00050		mg/L	1	5/22/2019 1:43:59 PM	45086
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/17/2019 12:46:40 PM	44988
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Acenaphthylene	ND	12	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Aniline	ND	18	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Anthracene	ND	13	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Azobenzene	ND	16	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Benz(a)anthracene	ND	18	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Benzo(a)pyrene	ND	18	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:20:00 AM
Lab ID: 1905448-007
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	54	100		µg/L	1	5/15/2019 9:32:05 AM	44850
Benzyl alcohol	ND	12	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Bis(2-ethylhexyl)phthalate	ND	22	50		µg/L	1	5/15/2019 9:32:05 AM	44850
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Carbazole	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/15/2019 9:32:05 AM	44850
4-Chloroaniline	ND	11	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2-Chloronaphthalene	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2-Chlorophenol	ND	13	50		µg/L	1	5/15/2019 9:32:05 AM	44850
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Chrysene	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Dibenzofuran	ND	16	50		µg/L	1	5/15/2019 9:32:05 AM	44850
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/15/2019 9:32:05 AM	44850
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/15/2019 9:32:05 AM	44850
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/15/2019 9:32:05 AM	44850
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Diethyl phthalate	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Dimethyl phthalate	ND	16	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/15/2019 9:32:05 AM	44850
2,4-Dimethylphenol	24	15	50	J	µg/L	1	5/15/2019 9:32:05 AM	44850
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/15/2019 9:32:05 AM	44850
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/15/2019 9:32:05 AM	44850
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Fluoranthene	ND	12	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Fluorene	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Hexachlorobenzene	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Hexachlorobutadiene	ND	24	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Hexachloroethane	ND	24	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Isophorone	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:20:00 AM
Lab ID: 1905448-007
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	30	15	50	J	µg/L	1	5/15/2019 9:32:05 AM	44850
2-Methylnaphthalene	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2-Methylphenol	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
3+4-Methylphenol	ND	18	50		µg/L	1	5/15/2019 9:32:05 AM	44850
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/15/2019 9:32:05 AM	44850
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/15/2019 9:32:05 AM	44850
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Naphthalene	ND	21	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2-Nitroaniline	ND	16	50		µg/L	1	5/15/2019 9:32:05 AM	44850
3-Nitroaniline	ND	16	50		µg/L	1	5/15/2019 9:32:05 AM	44850
4-Nitroaniline	ND	13	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Nitrobenzene	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2-Nitrophenol	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
4-Nitrophenol	ND	38	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Pentachlorophenol	ND	14	100		µg/L	1	5/15/2019 9:32:05 AM	44850
Phenanthrene	ND	14	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Phenol	ND	40	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Pyrene	ND	13	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Pyridine	ND	48	50		µg/L	1	5/15/2019 9:32:05 AM	44850
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/15/2019 9:32:05 AM	44850
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/15/2019 9:32:05 AM	44850
Surr: 2-Fluorophenol	52.5	0	15-101		%Rec	1	5/15/2019 9:32:05 AM	44850
Surr: Phenol-d5	38.3	0	15-84.6		%Rec	1	5/15/2019 9:32:05 AM	44850
Surr: 2,4,6-Tribromophenol	78.8	0	27.8-112		%Rec	1	5/15/2019 9:32:05 AM	44850
Surr: Nitrobenzene-d5	71.5	0	33-113		%Rec	1	5/15/2019 9:32:05 AM	44850
Surr: 2-Fluorobiphenyl	46.9	0	26.6-107		%Rec	1	5/15/2019 9:32:05 AM	44850
Surr: 4-Terphenyl-d14	82.2	0	18.7-148		%Rec	1	5/15/2019 9:32:05 AM	44850
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	110	0.33	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Toluene	0.87	0.70	2.0	J	µg/L	2	5/15/2019 5:40:14 PM	W5990
Ethylbenzene	13	0.26	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Methyl tert-butyl ether (MTBE)	240	0.91	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2,4-Trimethylbenzene	5.1	0.43	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,3,5-Trimethylbenzene	ND	0.38	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2-Dichloroethane (EDC)	ND	0.39	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Naphthalene	3.6	0.55	4.0	J	µg/L	2	5/15/2019 5:40:14 PM	W5990
1-Methylnaphthalene	51	0.63	8.0		µg/L	2	5/15/2019 5:40:14 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:20:00 AM
Lab ID: 1905448-007
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.69	8.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Acetone	18	2.4	20	J	µg/L	2	5/15/2019 5:40:14 PM	W5990
Bromobenzene	ND	0.49	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Bromodichloromethane	ND	0.27	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Bromoform	ND	0.58	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Bromomethane	ND	0.55	6.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
2-Butanone	ND	4.2	20		µg/L	2	5/15/2019 5:40:14 PM	W5990
Carbon disulfide	ND	0.91	20		µg/L	2	5/15/2019 5:40:14 PM	W5990
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Chlorobenzene	ND	0.39	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Chloroethane	ND	0.36	4.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Chloroform	ND	0.24	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Chloromethane	ND	0.64	6.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
cis-1,2-DCE	ND	0.38	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Dibromochloromethane	ND	0.48	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Dibromomethane	ND	0.42	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,1-Dichloroethane	1.1	0.28	2.0	J	µg/L	2	5/15/2019 5:40:14 PM	W5990
1,1-Dichloroethene	ND	0.41	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
2-Hexanone	ND	3.1	20		µg/L	2	5/15/2019 5:40:14 PM	W5990
Isopropylbenzene	1.1	0.38	2.0	J	µg/L	2	5/15/2019 5:40:14 PM	W5990
4-Isopropyltoluene	0.48	0.43	2.0	J	µg/L	2	5/15/2019 5:40:14 PM	W5990
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	5/15/2019 5:40:14 PM	W5990
Methylene Chloride	ND	0.31	6.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
n-Butylbenzene	ND	0.46	6.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
n-Propylbenzene	1.5	0.43	2.0	J	µg/L	2	5/15/2019 5:40:14 PM	W5990
sec-Butylbenzene	ND	0.50	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/8/2019 11:20:00 AM
Lab ID: 1905448-007
Matrix: AQUEOUS
Received Date: 5/8/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.38	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
tert-Butylbenzene	ND	0.41	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,1,2-Trichloroethane	ND	0.43	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Trichloroethene (TCE)	ND	0.33	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Vinyl chloride	ND	0.36	2.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Xylenes, Total	5.9	0.91	3.0		µg/L	2	5/15/2019 5:40:14 PM	W5990
Surr: 1,2-Dichloroethane-d4	85.9	0	70-130		%Rec	2	5/15/2019 5:40:14 PM	W5990
Surr: 4-Bromofluorobenzene	98.0	0	70-130		%Rec	2	5/15/2019 5:40:14 PM	W5990
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	2	5/15/2019 5:40:14 PM	W5990
Surr: Toluene-d8	88.0	0	70-130		%Rec	2	5/15/2019 5:40:14 PM	W5990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.69	0.061	0.10		mg/L	2	5/15/2019 5:40:14 PM	R59906
Surr: BFB	98.1	0	70-130		%Rec	2	5/15/2019 5:40:14 PM	R59906

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0794		0.00500	1	05/16/2019 14:51	WG1281717

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0811		0.00500	1	05/16/2019 14:52	WG1281717

Method Blank (MB)

(MB) R3411952-1 05/16/19 14:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1096373-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1096373-04 05/16/19 14:31 • (DUP) R3411952-3 05/16/19 14:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1097514-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097514-01 05/16/19 14:45 • (DUP) R3411952-6 05/16/19 14:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00565	1	200	J1	20

Laboratory Control Sample (LCS)

(LCS) R3411952-2 05/16/19 14:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.104	104	85.0-115	

L1097461-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097461-01 05/16/19 14:39 • (MS) R3411952-4 05/16/19 14:40 • (MSD) R3411952-5 05/16/19 14:41

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0981	0.0973	98.1	97.3	1	75.0-125			0.819	20

L1097540-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097540-02 05/16/19 14:52 • (MS) R3411952-7 05/16/19 14:53 • (MSD) R3411952-8 05/16/19 14:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0811	0.183	0.177	102	95.9	1	75.0-125			3.33	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**

05-Jun-19

Client: Marathon

Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-45086**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45086**	RunNo: **60089**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2029209** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0059	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45086**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **45086**	RunNo: **60089**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2029210** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	127	50	150			J
Barium	0.0021	0.0020	0.002000	0	107	50	150			
Beryllium	0.0019	0.0020	0.002000	0	95.8	50	150			J
Boron	0.039	0.040	0.04000	0	97.1	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	109	50	150			
Chromium	0.0061	0.0060	0.006000	0	101	50	150			
Cobalt	0.0058	0.0060	0.006000	0	97.3	50	150			J
Copper	0.0061	0.0060	0.006000	0	102	50	150			
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0083	0.0080	0.008000	0	104	50	150			
Nickel	0.0035	0.010	0.005000	0	69.7	50	150			J
Silver	0.0050	0.0050	0.005000	0	101	50	150			
Zinc	0.011	0.010	0.01000	0	110	50	150			

Sample ID: **LCS-45086**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45086**	RunNo: **60089**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2029218** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-45086** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45086** RunNo: **60089**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2029218** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	107	85	115			
Barium	0.48	0.0020	0.5000	0	96.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.0	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.49	0.0060	0.5000	0	97.7	85	115			
Cobalt	0.46	0.0060	0.5000	0	92.5	85	115			
Copper	0.50	0.0060	0.5000	0	99.3	85	115			
Iron	0.47	0.020	0.5000	0	94.2	85	115			
Manganese	0.48	0.0020	0.5000	0	95.2	85	115			
Molybdenum	0.50	0.0080	0.5000	0	101	85	115			
Nickel	0.47	0.010	0.5000	0	93.3	85	115			
Silver	0.10	0.0050	0.1000	0	105	85	115			
Zinc	0.47	0.010	0.5000	0	94.5	85	115			

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B59778** RunNo: **59778**
Prep Date: Analysis Date: **5/9/2019** SeqNo: **2016020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B59778** RunNo: **59778**
Prep Date: Analysis Date: **5/9/2019** SeqNo: **2016021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	108	50	150			J
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Beryllium	0.0019	0.0020	0.002000	0	93.8	50	150			J
Boron	0.040	0.040	0.04000	0	99.2	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Calcium	0.54	1.0	0.5000	0	108	50	150			J
Chromium	0.0081	0.0060	0.006000	0	135	50	150			
Cobalt	0.0057	0.0060	0.006000	0	95.7	50	150			J
Copper	0.0053	0.0060	0.006000	0	88.7	50	150			J
Magnesium	0.54	1.0	0.5000	0	108	50	150			J
Manganese	0.0023	0.0020	0.002000	0	113	50	150			
Molybdenum	0.0082	0.0080	0.008000	0	102	50	150			
Nickel	0.0055	0.010	0.005000	0	110	50	150			J
Potassium	0.54	1.0	0.5000	0	109	50	150			J
Zinc	0.0055	0.010	0.005000	0	109	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**

05-Jun-19

Client: Marathon

Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B59778**	RunNo: **59778**
Prep Date:	Analysis Date: **5/9/2019**	SeqNo: **2016022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	105	85	115			
Barium	0.48	0.0020	0.5000	0	95.8	85	115			
Beryllium	0.48	0.0020	0.5000	0	96.9	85	115			
Boron	0.50	0.040	0.5000	0	99.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Iron	0.49	0.020	0.5000	0	97.2	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	95.9	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.9	85	115			
Nickel	0.48	0.010	0.5000	0	95.2	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Zinc	0.48	0.010	0.5000	0	96.8	85	115			

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B59778**	RunNo: **59778**
Prep Date:	Analysis Date: **5/9/2019**	SeqNo: **2016023** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.020	0.020	0.02000	0	99.1	50	150			J

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59865**	RunNo: **59865**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**

05-Jun-19

Client: Marathon

Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B59865**	RunNo: **59865**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B59865**	RunNo: **59865**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019538** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0099	0.020	0.01000	0	99.2	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Cadmium	0.0018	0.0020	0.002000	0	91.8	50	150			J
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Cobalt	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Magnesium	0.52	1.0	0.5000	0	103	50	150			J
Molybdenum	0.0076	0.0080	0.008000	0	95.5	50	150			J
Nickel	0.0040	0.010	0.005000	0	80.2	50	150			J
Potassium	0.43	1.0	0.5000	0	85.7	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.9	50	150			J
Sodium	0.54	1.0	0.5000	0	109	50	150			J
Zinc	0.0057	0.010	0.005000	0	114	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B59865**	RunNo: **59865**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019539** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	109	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.6	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.3	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.5	85	115			
Nickel	0.48	0.010	0.5000	0	95.4	85	115			
Potassium	50	1.0	50.00	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B59865**	RunNo: **59865**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2019539** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.099	0.0050	0.1000	0	99.4	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.49	0.010	0.5000	0	97.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**

05-Jun-19

Client: Marathon

Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-45086**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **45086**	RunNo: **60081**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2028779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45086**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **45086**	RunNo: **60081**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2028780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Thallium	0.00046	0.00050	0.0005000	0	91.2	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.3	50	150			J

Sample ID: **MSLCS-45086**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **45086**	RunNo: **60081**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2028781** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	100	85	115			
Thallium	0.012	0.00050	0.01250	0	99.7	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **MB-45086**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **45086**	RunNo: **60081**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2028796** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID: **MSLLLCS-45086**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **45086**	RunNo: **60081**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2028797** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00097	0.0010	0.001000	0	97.1	50	150			J
Arsenic	0.00098	0.0010	0.001000	0	97.5	50	150			J
Selenium	0.00079	0.0010	0.001000	0	79.3	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MSLCS-45086** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45086** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028798** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	100	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID: **1905448-003GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-44** Batch ID: **45086** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0.0008324	110	70	130			
Arsenic	0.031	0.0010	0.02500	0.003109	111	70	130			
Lead	0.013	0.00050	0.01250	0.0009726	93.4	70	130			
Selenium	0.035	0.0010	0.02500	0.008906	102	70	130			
Thallium	0.012	0.00050	0.01250	0	94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **D59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00086	0.0010	0.001000	0	85.9	50	150			J
Arsenic	0.00097	0.0010	0.001000	0	96.7	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.2	50	150			J
Selenium	0.00057	0.0010	0.001000	0	56.8	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	91.1	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.8	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **D59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021322** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.5	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	94.2	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Thallium	0.012	0.00050	0.01250	0	95.7	85	115			
Uranium	0.012	0.00050	0.01250	0	94.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-44988**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44988**	RunNo: **59964**
Prep Date: **5/16/2019**	Analysis Date: **5/17/2019**	SeqNo: **2023879** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-44988**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44988**	RunNo: **59964**
Prep Date: **5/16/2019**	Analysis Date: **5/17/2019**	SeqNo: **2023880** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	94.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R59789**	RunNo: **59789**							
Prep Date:	Analysis Date: **5/9/2019**	SeqNo: **2016418**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R59789**	RunNo: **59789**							
Prep Date:	Analysis Date: **5/9/2019**	SeqNo: **2016419**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	92.3	90	110			
Bromide	2.4	0.10	2.500	0	95.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.2	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.7	90	110			
Sulfate	9.4	0.50	10.00	0	93.5	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R59981**	RunNo: **59981**							
Prep Date:	Analysis Date: **5/17/2019**	SeqNo: **2024342**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R59981**	RunNo: **59981**							
Prep Date:	Analysis Date: **5/17/2019**	SeqNo: **2024343**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**

05-Jun-19

Client: Marathon

Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-44861**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44861**	RunNo: **59854**
Prep Date: **5/13/2019**	Analysis Date: **5/13/2019**	SeqNo: **2018984** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.087	0.010	0.1000	0	86.8	70	130			

Sample ID: **MB-44861**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44861**	RunNo: **59854**
Prep Date: **5/13/2019**	Analysis Date: **5/13/2019**	SeqNo: **2018985** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-44821**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **44821**	RunNo: **59787**
Prep Date: **5/9/2019**	Analysis Date: **5/10/2019**	SeqNo: **2016414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	71.8	135			
Surr: DNOP	0.50		0.5000		99.4	70	130			

Sample ID: **MB-44821**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **44821**	RunNo: **59787**
Prep Date: **5/9/2019**	Analysis Date: **5/10/2019**	SeqNo: **2016415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.3		1.000		125	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**

05-Jun-19

Client: Marathon

Project: 2019 2nd QTR MKTF Wells

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020666** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.0	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.4	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		88.6	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	8.6		10.00		86.4	70	130			

Sample ID: **1905448-003ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-44**	Batch ID: **R59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020674** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.8	70	130			
Toluene	19	1.0	20.00	0	97.4	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.4	67.6	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.8	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.4	70	130			
Surr: Toluene-d8	8.4		10.00		83.9	70	130			

Sample ID: **1905448-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-44**	Batch ID: **R59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020675** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.0	70	130	7.23	20	
Toluene	19	1.0	20.00	0	95.3	70	130	2.14	20	
Chlorobenzene	20	1.0	20.00	0	98.1	70	130	3.79	20	
1,1-Dichloroethene	18	1.0	20.00	0	90.9	67.6	130	8.01	20	
Trichloroethene (TCE)	17	1.0	20.00	0	83.5	70	130	8.25	20	
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.8		10.00		88.0	70	130	0	0	
Surr: Dibromofluoromethane	9.7		10.00		96.7	70	130	0	0	
Surr: Toluene-d8	8.9		10.00		88.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020681** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020681** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.1	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.5	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.9	70	130			
Surr: Toluene-d8	8.9		10.00		89.2	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021373** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	85.8	70	130			
Toluene	18	1.0	20.00	0	90.8	70	130			
Chlorobenzene	19	1.0	20.00	0	93.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021373** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17	1.0	20.00	0	84.7	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	78.9	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.1	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.4	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	8.8		10.00		88.0	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021394** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021394** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021394** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **mb-44850** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44850** RunNo: **59871**
Prep Date: **5/10/2019** Analysis Date: **5/14/2019** SeqNo: **2019766** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **mb-44850**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44850**	RunNo: **59871**
Prep Date: **5/10/2019**	Analysis Date: **5/14/2019**	SeqNo: **2019766** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.4	15	101			
Surr: Phenol-d5	71		200.0		35.3	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		59.2	27.8	112			
Surr: Nitrobenzene-d5	67		100.0		67.0	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		60.5	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		63.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **lcs-44850**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44850**	RunNo: **59871**
Prep Date: **5/10/2019**	Analysis Date: **5/14/2019**	SeqNo: **2019767** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	71.5	32.2	94			
4-Chloro-3-methylphenol	170	10	200.0	0	85.8	37.7	101			
2-Chlorophenol	160	10	200.0	0	77.8	32.6	90.1			
1,4-Dichlorobenzene	56	10	100.0	0	55.9	30	87.2			
2,4-Dinitrotoluene	66	10	100.0	0	66.2	35.9	85.8			
N-Nitrosodi-n-propylamine	85	10	100.0	0	84.7	37.1	108			
4-Nitrophenol	90	10	200.0	0	45.2	22.4	86.6			
Pentachlorophenol	110	20	200.0	0	55.8	31.6	91			
Phenol	95	10	200.0	0	47.4	21.7	84.9			
Pyrene	73	10	100.0	0	72.9	46.3	103			
1,2,4-Trichlorobenzene	65	10	100.0	0	65.2	30.2	88.3			
Surr: 2-Fluorophenol	94		200.0		47.0	15	101			
Surr: Phenol-d5	79		200.0		39.6	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		78.5	27.8	112			
Surr: Nitrobenzene-d5	69		100.0		69.1	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		59.5	26.6	107			
Surr: 4-Terphenyl-d14	79		100.0		79.5	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **1905448-004ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-43**	Batch ID: **G59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020700** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	88.2	70	130			
Surr: BFB	9.6		10.00		95.9	70	130			

Sample ID: **1905448-004amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-43**	Batch ID: **G59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020701** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.40	0.050	0.5000	0	80.7	70	130	8.81	20	
Surr: BFB	9.8		10.00		98.2	70	130	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.2	70	130			
Surr: BFB	9.6		10.00		96.2	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G59887**	RunNo: **59887**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.7		10.00		96.6	70	130			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.8	70	130			
Surr: BFB	9.4		10.00		94.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021416** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905448**
05-Jun-19

Client: Marathon
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021416** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.6		10.00		95.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905448** RcptNo: **1**

Received By: **Victoria Zellar** **5/8/2019 4:30:00 PM** Victoria Zellar

Completed By: **Isaiah Ortiz** **5/9/2019 7:10:22 AM** I-OK

Reviewed By: ENM 5/9/19

LB: Thm 5-9-19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐

Samples were collected the same day and chilled.

5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 15 2 (<2 or >12 unless noted)

Adjusted? No

Checked by: Thm 5-9-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.0	Good	Yes			
2	6.0	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush

Project Name:
2019 2ND QTR - MKTF WELLS

Project #:
MKTF, OAPIS-1, STP1-NW

Project Manager:
BRIAN MOORE

Sampler: CAJOHNSON1@MARATHONPETROLEUM.COM

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.9°C + (CF) 0.1 = 7.0°C
we sit 8/19
5.9°C + (CF) 0.1 = HEAL No. 6.0°C
2 coolers
1905448

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		8260+MTBE	8015D(DRO/MRO/GRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	MAJOR CATIONS/ANIONS		METHOD 8011 - EDB	CYANIDE							Air Bubbles (Y or N)
5/8/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-001	X															
5/8/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	HCL	-002	X															
5/8/2019	836	AQUEOUS	MKTF-44	MISC	MISC	-003	X	X	X	X	X	X										
5/8/2019	910	AQUEOUS	MKTF-43	MISC	MISC	-004	X	X	2	X	X	X		X								
5/8/2019	1020	AQUEOUS	STP1-NW	MISC	MISC	-005	X	X	X	X	X	X										
5/8/2019	1115	AQUEOUS	OAPIS-1	MISC	MISC	-006	X	X	X	X	X	X		X	X							
5/8/2019	1120	AQUEOUS	DUPLICATE	MISC	MISC	-007	X	X	X	X	X	X		X	X							

Date	Time	Relinquished by:	Received by:	Date	Time
~~5/8/2019~~ 05/08/19	1410		Cheyenne Vigil	5-8-19	1012
5/8/19	1630	Cheyenne Vigil	CDO	5/8/19	1630

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0794		0.00500	1	05/16/2019 14:51	WG1281717

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0811		0.00500	1	05/16/2019 14:52	WG1281717

Method Blank (MB)

(MB) R3411952-1 05/16/19 14:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1096373-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1096373-04 05/16/19 14:31 • (DUP) R3411952-3 05/16/19 14:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1097514-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1097514-01 05/16/19 14:45 • (DUP) R3411952-6 05/16/19 14:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00565	1	200	J1	20

Laboratory Control Sample (LCS)

(LCS) R3411952-2 05/16/19 14:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.104	104	85.0-115	

L1097461-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097461-01 05/16/19 14:39 • (MS) R3411952-4 05/16/19 14:40 • (MSD) R3411952-5 05/16/19 14:41

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0981	0.0973	98.1	97.3	1	75.0-125			0.819	20

L1097540-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1097540-02 05/16/19 14:52 • (MS) R3411952-7 05/16/19 14:53 • (MSD) R3411952-8 05/16/19 14:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0811	0.183	0.177	102	95.9	1	75.0-125			3.33	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 05, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX:

RE: 2019 2nd QTR MKTF Wells OrderNo.: 1905520

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/9/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 7:00:00 AM
Lab ID: 1905520-001 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Toluene	ND	0.35	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Naphthalene	ND	0.28	2.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Acetone	ND	1.2	10		µg/L	1	5/15/2019 7:34:51 PM	W5990
Bromobenzene	ND	0.24	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Bromoform	ND	0.29	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Bromomethane	ND	0.27	3.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
2-Butanone	ND	2.1	10		µg/L	1	5/15/2019 7:34:51 PM	W5990
Carbon disulfide	ND	0.45	10		µg/L	1	5/15/2019 7:34:51 PM	W5990
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Chloroethane	ND	0.18	2.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Chloroform	ND	0.12	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Chloromethane	ND	0.32	3.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Dibromomethane	ND	0.21	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/15/2019 7:34:51 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 7:00:00 AM
Lab ID: 1905520-001 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
2-Hexanone	ND	1.5	10		µg/L	1	5/15/2019 7:34:51 PM	W5990
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2019 7:34:51 PM	W5990
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Styrene	ND	0.19	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2019 7:34:51 PM	W5990
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/15/2019 7:34:51 PM	W5990
Surr: 1,2-Dichloroethane-d4	84.7	0	70-130		%Rec	1	5/15/2019 7:34:51 PM	W5990
Surr: 4-Bromofluorobenzene	95.1	0	70-130		%Rec	1	5/15/2019 7:34:51 PM	W5990
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	5/15/2019 7:34:51 PM	W5990
Surr: Toluene-d8	88.1	0	70-130		%Rec	1	5/15/2019 7:34:51 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date:
Lab ID: 1905520-002
Matrix: TRIP BLANK
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Toluene	ND	0.35	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Naphthalene	ND	0.28	2.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Acetone	ND	1.2	10		µg/L	1	5/15/2019 8:03:39 PM	W5990
Bromobenzene	ND	0.24	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Bromoform	ND	0.29	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Bromomethane	ND	0.27	3.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
2-Butanone	ND	2.1	10		µg/L	1	5/15/2019 8:03:39 PM	W5990
Carbon disulfide	ND	0.45	10		µg/L	1	5/15/2019 8:03:39 PM	W5990
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Chloroethane	ND	0.18	2.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Chloroform	ND	0.12	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Chloromethane	ND	0.32	3.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Dibromomethane	ND	0.21	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/15/2019 8:03:39 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR MKTF Wells
Collection Date:
Lab ID: 1905520-002
Matrix: TRIP BLANK
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
2-Hexanone	ND	1.5	10		µg/L	1	5/15/2019 8:03:39 PM	W5990
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2019 8:03:39 PM	W5990
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Styrene	ND	0.19	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2019 8:03:39 PM	W5990
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/15/2019 8:03:39 PM	W5990
Surr: 1,2-Dichloroethane-d4	84.5	0	70-130		%Rec	1	5/15/2019 8:03:39 PM	W5990
Surr: 4-Bromofluorobenzene	96.5	0	70-130		%Rec	1	5/15/2019 8:03:39 PM	W5990
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	1	5/15/2019 8:03:39 PM	W5990
Surr: Toluene-d8	88.6	0	70-130		%Rec	1	5/15/2019 8:03:39 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 8:45:00 AM
Lab ID: 1905520-003
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0092		µg/L	1	5/16/2019 3:05:29 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	11	0.35	1.0		mg/L	1	5/15/2019 10:18:42 AM	44901
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2019 10:18:42 AM	44901
Surr: DNOP	117	0	70-130		%Rec	1	5/15/2019 10:18:42 AM	44901
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/10/2019 12:36:35 PM	R59794
Chloride	140	1.2	10		mg/L	20	5/10/2019 12:49:00 PM	R59794
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/10/2019 12:36:35 PM	R59794
Bromide	1.5	0.089	0.50		mg/L	5	5/10/2019 12:36:35 PM	R59794
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/10/2019 12:36:35 PM	R59794
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/10/2019 12:36:35 PM	R59794
Sulfate	0.31	0.27	2.5	J	mg/L	5	5/10/2019 12:36:35 PM	R59794
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.030	0.0025	0.020		mg/L	1	5/24/2019 1:48:36 PM	A60186
Barium	1.8	0.0032	0.010		mg/L	5	5/24/2019 1:50:37 PM	A60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 1:48:36 PM	A60186
Boron	0.30	0.0045	0.040		mg/L	1	5/24/2019 1:48:36 PM	A60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 1:48:36 PM	A60186
Calcium	150	0.31	5.0		mg/L	5	5/24/2019 1:50:37 PM	A60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 1:48:36 PM	A60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 1:48:36 PM	A60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 1:48:36 PM	A60186
Iron	11	0.17	0.40	*	mg/L	20	5/24/2019 1:59:25 PM	A60186
Magnesium	31	0.050	1.0		mg/L	1	5/24/2019 1:48:36 PM	A60186
Manganese	2.4	0.0014	0.010	*	mg/L	5	5/24/2019 1:50:37 PM	A60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 1:48:36 PM	A60186
Nickel	ND	0.0040	0.010		mg/L	1	5/24/2019 1:48:36 PM	A60186
Potassium	0.63	0.16	1.0	J	mg/L	1	5/24/2019 1:48:36 PM	A60186
Silver	0.0016	0.00094	0.0050	J	mg/L	1	5/24/2019 1:48:36 PM	A60186
Sodium	290	2.1	5.0		mg/L	5	5/24/2019 1:50:37 PM	A60186
Zinc	0.034	0.0023	0.010		mg/L	1	5/24/2019 1:48:36 PM	A60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	11	0.050	0.40	*	mg/L	20	5/28/2019 12:46:09 PM	45106
Barium	2.1	0.0032	0.010	*	mg/L	5	5/23/2019 10:11:27 PM	45106
Beryllium	0.0011	0.00028	0.0020	J	mg/L	1	5/23/2019 10:09:27 PM	45106
Boron	0.32	0.0045	0.040		mg/L	1	5/23/2019 10:09:27 PM	45106

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 8:45:00 AM
Lab ID: 1905520-003
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 10:09:27 PM	45106
Chromium	0.0019	0.0015	0.0060	J	mg/L	1	5/23/2019 10:09:27 PM	45106
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 10:09:27 PM	45106
Copper	0.0054	0.0041	0.0060	J	mg/L	1	5/23/2019 10:09:27 PM	45106
Iron	15	0.17	0.40	*	mg/L	20	5/28/2019 12:46:09 PM	45106
Manganese	2.7	0.0014	0.010	*	mg/L	5	5/23/2019 10:11:27 PM	45106
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 10:09:27 PM	45106
Nickel	0.011	0.0040	0.010		mg/L	1	5/23/2019 10:09:27 PM	45106
Silver	0.0018	0.0014	0.0050	J	mg/L	1	5/23/2019 10:09:27 PM	45106
Zinc	0.017	0.0058	0.010		mg/L	1	5/23/2019 10:09:27 PM	45106
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:55:09 PM	C59847
Arsenic	0.013	0.00050	0.0050	*	mg/L	5	5/13/2019 3:55:09 PM	C59847
Lead	0.0017	0.00027	0.0025	J	mg/L	5	5/13/2019 3:55:09 PM	C59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 3:55:09 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 3:55:09 PM	C59847
Uranium	0.0010	0.00037	0.0025	J	mg/L	5	5/13/2019 3:55:09 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00051	0.00039	0.0010	J	mg/L	1	5/22/2019 3:21:31 PM	45106
Arsenic	0.012	0.00031	0.0010	*	mg/L	1	5/22/2019 3:21:31 PM	45106
Lead	0.013	0.00027	0.0025		mg/L	5	5/22/2019 4:47:10 PM	45106
Selenium	0.00091	0.00048	0.0010	J	mg/L	1	5/22/2019 3:21:31 PM	45106
Thallium	0.00014	0.000052	0.00050	J	mg/L	1	5/22/2019 3:21:31 PM	45106
Uranium	0.0010	0.000085	0.00050		mg/L	1	5/22/2019 3:21:31 PM	45106
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000051	0.000038	0.00020	J	mg/L	1	5/22/2019 12:40:28 PM	45093
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	5.7	3.0	10	J	µg/L	1	5/23/2019 1:12:04 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/23/2019 1:12:04 PM	44966

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 8:45:00 AM
Lab ID: 1905520-003
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/23/2019 1:12:04 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Bis(2-ethylhexyl)phthalate	4.9	4.3	10	J	µg/L	1	5/23/2019 1:12:04 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Carbazole	10	2.9	10		µg/L	1	5/23/2019 1:12:04 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/23/2019 1:12:04 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/23/2019 1:12:04 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/23/2019 1:12:04 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/23/2019 1:12:04 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/23/2019 1:12:04 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/23/2019 1:12:04 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/23/2019 1:12:04 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Fluorene	8.8	2.9	10	J	µg/L	1	5/23/2019 1:12:04 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 8:45:00 AM
Lab ID: 1905520-003
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	150	3.1	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2-Methylnaphthalene	230	3.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/23/2019 1:12:04 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/23/2019 1:12:04 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/23/2019 1:12:04 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Naphthalene	320	21	50		µg/L	5	5/24/2019 1:56:33 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 1:12:04 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 1:12:04 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/23/2019 1:12:04 PM	44966
Phenanthrene	5.5	2.8	10	J	µg/L	1	5/23/2019 1:12:04 PM	44966
Phenol	11	8.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/23/2019 1:12:04 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/23/2019 1:12:04 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/23/2019 1:12:04 PM	44966
Surr: 2-Fluorophenol	51.1	0	15-101		%Rec	1	5/23/2019 1:12:04 PM	44966
Surr: Phenol-d5	47.8	0	15-84.6		%Rec	1	5/23/2019 1:12:04 PM	44966
Surr: 2,4,6-Tribromophenol	83.6	0	27.8-112		%Rec	1	5/23/2019 1:12:04 PM	44966
Surr: Nitrobenzene-d5	81.9	0	33-113		%Rec	1	5/23/2019 1:12:04 PM	44966
Surr: 2-Fluorobiphenyl	71.7	0	26.6-107		%Rec	1	5/23/2019 1:12:04 PM	44966
Surr: 4-Terphenyl-d14	90.4	0	18.7-148		%Rec	1	5/23/2019 1:12:04 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1800	3.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Toluene	ND	7.0	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Ethylbenzene	770	2.6	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Methyl tert-butyl ether (MTBE)	7800	91	200		µg/L	200	5/15/2019 8:32:15 PM	W5990
1,2,4-Trimethylbenzene	630	4.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,3,5-Trimethylbenzene	100	3.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Naphthalene	600	5.5	40		µg/L	20	5/15/2019 9:00:49 PM	W5990
1-Methylnaphthalene	270	6.3	80		µg/L	20	5/15/2019 9:00:49 PM	W5990

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Qualifiers:

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D	Sample Diluted Due to Matrix
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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 8:45:00 AM
Lab ID: 1905520-003
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	360	6.9	80		µg/L	20	5/15/2019 9:00:49 PM	W5990
Acetone	ND	24	200		µg/L	20	5/15/2019 9:00:49 PM	W5990
Bromobenzene	ND	4.9	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Bromodichloromethane	ND	2.7	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Bromoform	ND	5.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Bromomethane	ND	5.5	60		µg/L	20	5/15/2019 9:00:49 PM	W5990
2-Butanone	ND	42	200		µg/L	20	5/15/2019 9:00:49 PM	W5990
Carbon disulfide	ND	9.1	200		µg/L	20	5/15/2019 9:00:49 PM	W5990
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Chlorobenzene	ND	3.9	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Chloroethane	ND	3.6	40		µg/L	20	5/15/2019 9:00:49 PM	W5990
Chloroform	ND	2.4	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Chloromethane	ND	6.4	60		µg/L	20	5/15/2019 9:00:49 PM	W5990
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
cis-1,2-DCE	ND	3.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/15/2019 9:00:49 PM	W5990
Dibromochloromethane	ND	4.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Dibromomethane	ND	4.2	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,1-Dichloroethane	ND	2.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,1-Dichloroethene	ND	4.1	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
2-Hexanone	ND	31	200		µg/L	20	5/15/2019 9:00:49 PM	W5990
Isopropylbenzene	39	3.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
4-Isopropyltoluene	5.4	4.3	20	J	µg/L	20	5/15/2019 9:00:49 PM	W5990
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/15/2019 9:00:49 PM	W5990
Methylene Chloride	ND	3.1	60		µg/L	20	5/15/2019 9:00:49 PM	W5990
n-Butylbenzene	ND	4.6	60		µg/L	20	5/15/2019 9:00:49 PM	W5990
n-Propylbenzene	110	4.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
sec-Butylbenzene	7.1	5.0	20	J	µg/L	20	5/15/2019 9:00:49 PM	W5990

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Qualifiers:

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B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
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ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 8:45:00 AM
Lab ID: 1905520-003
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	3.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/15/2019 9:00:49 PM	W5990
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/15/2019 9:00:49 PM	W5990
Vinyl chloride	ND	3.6	20		µg/L	20	5/15/2019 9:00:49 PM	W5990
Xylenes, Total	610	9.1	30		µg/L	20	5/15/2019 9:00:49 PM	W5990
Surr: 1,2-Dichloroethane-d4	87.7	0	70-130		%Rec	20	5/15/2019 9:00:49 PM	W5990
Surr: 4-Bromofluorobenzene	93.2	0	70-130		%Rec	20	5/15/2019 9:00:49 PM	W5990
Surr: Dibromofluoromethane	98.9	0	70-130		%Rec	20	5/15/2019 9:00:49 PM	W5990
Surr: Toluene-d8	87.9	0	70-130		%Rec	20	5/15/2019 9:00:49 PM	W5990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	19	0.61	1.0		mg/L	20	5/15/2019 9:00:49 PM	R59906
Surr: BFB	94.9	0	70-130		%Rec	20	5/15/2019 9:00:49 PM	R59906

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 9:38:00 AM
Lab ID: 1905520-004
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0092		µg/L	1	5/16/2019 3:20:37 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/15/2019 11:25:09 AM	44901
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2019 11:25:09 AM	44901
Surr: DNOP	115	0	70-130		%Rec	1	5/15/2019 11:25:09 AM	44901
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.35	0.25	0.50	J	mg/L	5	5/10/2019 1:01:24 PM	R59794
Chloride	890	6.2	50		mg/L	100	5/16/2019 1:47:40 PM	R59960
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/10/2019 1:01:24 PM	R59794
Bromide	ND	0.089	0.50		mg/L	5	5/10/2019 1:01:24 PM	R59794
Nitrogen, Nitrate (As N)	9.7	0.027	0.50		mg/L	5	5/10/2019 1:01:24 PM	R59794
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/10/2019 1:01:24 PM	R59794
Sulfate	60	0.27	2.5		mg/L	5	5/10/2019 1:01:24 PM	R59794
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/28/2019 7:38:09 PM	A60216
Barium	0.23	0.00065	0.0020		mg/L	1	5/28/2019 7:38:09 PM	A60216
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 7:38:09 PM	A60216
Boron	0.34	0.0045	0.040		mg/L	1	5/28/2019 7:38:09 PM	A60216
Cadmium	ND	0.00055	0.0020		mg/L	1	5/28/2019 7:38:09 PM	A60216
Calcium	180	0.31	5.0		mg/L	5	5/28/2019 7:40:19 PM	A60216
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 7:38:09 PM	A60216
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 7:38:09 PM	A60216
Copper	ND	0.0013	0.0060		mg/L	1	5/28/2019 7:38:09 PM	A60216
Iron	0.021	0.0087	0.020		mg/L	1	5/28/2019 7:38:09 PM	A60216
Magnesium	45	0.050	1.0		mg/L	1	5/28/2019 7:38:09 PM	A60216
Manganese	0.00082	0.00029	0.0020	J	mg/L	1	5/28/2019 7:38:09 PM	A60216
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 7:38:09 PM	A60216
Nickel	ND	0.0040	0.010		mg/L	1	5/28/2019 7:38:09 PM	A60216
Potassium	1.3	0.16	1.0		mg/L	1	5/28/2019 7:38:09 PM	A60216
Silver	0.0020	0.00094	0.0050	J	mg/L	1	5/28/2019 7:38:09 PM	A60216
Sodium	470	2.1	5.0		mg/L	5	5/28/2019 7:40:19 PM	A60216
Zinc	0.012	0.0023	0.010		mg/L	1	5/28/2019 7:38:09 PM	A60216
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.97	0.0025	0.020	*	mg/L	1	5/23/2019 10:13:37 PM	45106
Barium	0.25	0.00065	0.0020		mg/L	1	5/23/2019 10:13:37 PM	45106
Beryllium	ND	0.00028	0.0020		mg/L	1	5/23/2019 10:13:37 PM	45106
Boron	0.36	0.0045	0.040		mg/L	1	5/23/2019 10:13:37 PM	45106

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 9:38:00 AM
Lab ID: 1905520-004
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 10:13:37 PM	45106
Chromium	ND	0.0015	0.0060		mg/L	1	5/23/2019 10:13:37 PM	45106
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 10:13:37 PM	45106
Copper	ND	0.0041	0.0060		mg/L	1	5/23/2019 10:13:37 PM	45106
Iron	0.94	0.044	0.10	*	mg/L	5	5/28/2019 12:48:25 PM	45106
Manganese	0.024	0.00029	0.0020		mg/L	1	5/23/2019 10:13:37 PM	45106
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 10:13:37 PM	45106
Nickel	ND	0.0040	0.010		mg/L	1	5/23/2019 10:13:37 PM	45106
Silver	0.0036	0.0014	0.0050	J	mg/L	1	5/23/2019 10:13:37 PM	45106
Zinc	0.0092	0.0058	0.010	J	mg/L	1	5/23/2019 10:13:37 PM	45106
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 3:57:52 PM	C59847
Arsenic	ND	0.00050	0.0050		mg/L	5	5/13/2019 3:57:52 PM	C59847
Lead	ND	0.00027	0.0025		mg/L	5	5/13/2019 3:57:52 PM	C59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 3:57:52 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 3:57:52 PM	C59847
Uranium	0.015	0.00037	0.0025		mg/L	5	5/13/2019 3:57:52 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00063	0.00039	0.0010	J	mg/L	1	5/22/2019 3:28:06 PM	45106
Arsenic	0.00065	0.00031	0.0010	J	mg/L	1	5/22/2019 3:28:06 PM	45106
Lead	0.00089	0.000055	0.00050		mg/L	1	5/22/2019 3:28:06 PM	45106
Selenium	0.0014	0.00048	0.0010		mg/L	1	5/22/2019 3:28:06 PM	45106
Thallium	0.00011	0.000052	0.00050	J	mg/L	1	5/22/2019 3:28:06 PM	45106
Uranium	0.015	0.00042	0.0025		mg/L	5	5/22/2019 4:58:09 PM	45106
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/22/2019 12:42:43 PM	45093
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/23/2019 1:41:49 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 9:38:00 AM
Lab ID: 1905520-004
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/23/2019 1:41:49 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/23/2019 1:41:49 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/23/2019 1:41:49 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/23/2019 1:41:49 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/23/2019 1:41:49 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/23/2019 1:41:49 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/23/2019 1:41:49 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/23/2019 1:41:49 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/23/2019 1:41:49 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/23/2019 1:41:49 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 9:38:00 AM
Lab ID: 1905520-004
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/23/2019 1:41:49 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/23/2019 1:41:49 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/23/2019 1:41:49 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Naphthalene	ND	4.1	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 1:41:49 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 1:41:49 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/23/2019 1:41:49 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/23/2019 1:41:49 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/23/2019 1:41:49 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/23/2019 1:41:49 PM	44966
Surr: 2-Fluorophenol	37.8	0	15-101		%Rec	1	5/23/2019 1:41:49 PM	44966
Surr: Phenol-d5	45.4	0	15-84.6		%Rec	1	5/23/2019 1:41:49 PM	44966
Surr: 2,4,6-Tribromophenol	65.2	0	27.8-112		%Rec	1	5/23/2019 1:41:49 PM	44966
Surr: Nitrobenzene-d5	61.4	0	33-113		%Rec	1	5/23/2019 1:41:49 PM	44966
Surr: 2-Fluorobiphenyl	53.3	0	26.6-107		%Rec	1	5/23/2019 1:41:49 PM	44966
Surr: 4-Terphenyl-d14	99.7	0	18.7-148		%Rec	1	5/23/2019 1:41:49 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Toluene	ND	0.35	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2,4-Trimethylbenzene	0.22	0.21	1.0	J	µg/L	1	5/15/2019 9:29:34 PM	W5990
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Naphthalene	ND	0.28	2.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/15/2019 9:29:34 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 9:38:00 AM
Lab ID: 1905520-004
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Acetone	5.5	1.2	10	J	µg/L	1	5/15/2019 9:29:34 PM	W5990
Bromobenzene	ND	0.24	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Bromoform	ND	0.29	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Bromomethane	ND	0.27	3.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
2-Butanone	ND	2.1	10		µg/L	1	5/15/2019 9:29:34 PM	W5990
Carbon disulfide	ND	0.45	10		µg/L	1	5/15/2019 9:29:34 PM	W5990
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Chloroethane	ND	0.18	2.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Chloroform	ND	0.12	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Chloromethane	ND	0.32	3.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Dibromomethane	ND	0.21	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
2-Hexanone	ND	1.5	10		µg/L	1	5/15/2019 9:29:34 PM	W5990
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2019 9:29:34 PM	W5990
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 9:38:00 AM
Lab ID: 1905520-004 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Trichloroethene (TCE)	0.49	0.17	1.0	J	µg/L	1	5/15/2019 9:29:34 PM	W5990
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2019 9:29:34 PM	W5990
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/15/2019 9:29:34 PM	W5990
Surr: 1,2-Dichloroethane-d4	85.5	0	70-130		%Rec	1	5/15/2019 9:29:34 PM	W5990
Surr: 4-Bromofluorobenzene	94.8	0	70-130		%Rec	1	5/15/2019 9:29:34 PM	W5990
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	5/15/2019 9:29:34 PM	W5990
Surr: Toluene-d8	88.2	0	70-130		%Rec	1	5/15/2019 9:29:34 PM	W5990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/15/2019 9:29:34 PM	R59906
Surr: BFB	97.5	0	70-130		%Rec	1	5/15/2019 9:29:34 PM	R59906

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-005
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/16/2019 3:35:36 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/15/2019 11:47:09 AM	44901
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2019 11:47:09 AM	44901
Surr: DNOP	122	0	70-130		%Rec	1	5/15/2019 11:47:09 AM	44901
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.33	0.25	0.50	J	mg/L	5	5/10/2019 1:26:14 PM	R59794
Chloride	110	1.2	10		mg/L	20	5/10/2019 1:38:39 PM	R59794
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/10/2019 1:26:14 PM	R59794
Bromide	0.68	0.089	0.50		mg/L	5	5/10/2019 1:26:14 PM	R59794
Nitrogen, Nitrate (As N)	0.16	0.027	0.50	J	mg/L	5	5/10/2019 1:26:14 PM	R59794
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/10/2019 1:26:14 PM	R59794
Sulfate	240	0.27	2.5		mg/L	5	5/10/2019 1:26:14 PM	R59794
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0079	0.0025	0.020	J	mg/L	1	5/28/2019 7:50:49 PM	A60216
Barium	0.053	0.00065	0.0020		mg/L	1	5/28/2019 7:50:49 PM	A60216
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 7:50:49 PM	A60216
Boron	0.48	0.0045	0.040		mg/L	1	5/28/2019 7:50:49 PM	A60216
Cadmium	ND	0.00055	0.0020		mg/L	1	5/28/2019 7:50:49 PM	A60216
Calcium	79	0.062	1.0		mg/L	1	5/28/2019 7:50:49 PM	A60216
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 7:50:49 PM	A60216
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 7:50:49 PM	A60216
Copper	ND	0.0013	0.0060		mg/L	1	5/28/2019 7:50:49 PM	A60216
Iron	0.016	0.0087	0.020	J	mg/L	1	5/28/2019 7:50:49 PM	A60216
Magnesium	18	0.050	1.0		mg/L	1	5/28/2019 7:50:49 PM	A60216
Manganese	0.081	0.00029	0.0020	*	mg/L	1	5/28/2019 7:50:49 PM	A60216
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 7:50:49 PM	A60216
Nickel	ND	0.0040	0.010		mg/L	1	5/28/2019 7:50:49 PM	A60216
Potassium	0.76	0.16	1.0	J	mg/L	1	5/28/2019 7:50:49 PM	A60216
Silver	ND	0.00094	0.0050		mg/L	1	5/28/2019 7:50:49 PM	A60216
Sodium	320	2.1	5.0		mg/L	5	5/28/2019 7:53:01 PM	A60216
Zinc	0.031	0.0023	0.010		mg/L	1	5/28/2019 7:50:49 PM	A60216
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	11	0.050	0.40	*	mg/L	20	5/30/2019 4:28:34 PM	45106
Barium	0.25	0.00065	0.0020		mg/L	1	5/23/2019 10:17:57 PM	45106
Beryllium	0.00059	0.00028	0.0020	J	mg/L	1	5/23/2019 10:17:57 PM	45106
Boron	0.52	0.0045	0.040		mg/L	1	5/23/2019 10:17:57 PM	45106

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-005
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 10:17:57 PM	45106
Chromium	0.0033	0.0015	0.0060	J	mg/L	1	5/23/2019 10:17:57 PM	45106
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 10:17:57 PM	45106
Copper	0.0051	0.0041	0.0060	J	mg/L	1	5/23/2019 10:17:57 PM	45106
Iron	4.4	0.087	0.20	*	mg/L	10	5/28/2019 12:50:47 PM	45106
Manganese	0.32	0.00029	0.0020	*	mg/L	1	5/23/2019 10:17:57 PM	45106
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 10:17:57 PM	45106
Nickel	0.0076	0.0040	0.010	J	mg/L	1	5/23/2019 10:17:57 PM	45106
Silver	ND	0.0014	0.0050		mg/L	1	5/23/2019 10:17:57 PM	45106
Zinc	0.025	0.0058	0.010		mg/L	1	5/23/2019 10:17:57 PM	45106
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 4:00:35 PM	C59847
Arsenic	0.00055	0.00050	0.0050	J	mg/L	5	5/13/2019 4:00:35 PM	C59847
Lead	ND	0.00027	0.0025		mg/L	5	5/13/2019 4:00:35 PM	C59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 4:00:35 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 4:00:35 PM	C59847
Uranium	0.032	0.00037	0.0025	*	mg/L	5	5/13/2019 4:00:35 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/22/2019 3:36:55 PM	45106
Arsenic	0.0011	0.00031	0.0010		mg/L	1	5/22/2019 3:36:55 PM	45106
Lead	0.0049	0.000055	0.00050		mg/L	1	5/22/2019 3:36:55 PM	45106
Selenium	ND	0.00048	0.0010		mg/L	1	5/22/2019 3:36:55 PM	45106
Thallium	0.00016	0.000052	0.00050	J	mg/L	1	5/22/2019 3:36:55 PM	45106
Uranium	0.033	0.00042	0.0025	*	mg/L	5	5/22/2019 5:00:21 PM	45106
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000080	0.000038	0.00020	J	mg/L	1	5/22/2019 12:44:58 PM	45093
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/23/2019 3:10:44 PM	44966

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-005
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/23/2019 3:10:44 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/23/2019 3:10:44 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/23/2019 3:10:44 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/23/2019 3:10:44 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/23/2019 3:10:44 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/23/2019 3:10:44 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/23/2019 3:10:44 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/23/2019 3:10:44 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/23/2019 3:10:44 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/23/2019 3:10:44 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-005
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/23/2019 3:10:44 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/23/2019 3:10:44 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/23/2019 3:10:44 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Naphthalene	ND	4.1	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 3:10:44 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 3:10:44 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/23/2019 3:10:44 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/23/2019 3:10:44 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/23/2019 3:10:44 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/23/2019 3:10:44 PM	44966
Surr: 2-Fluorophenol	63.3	0	15-101		%Rec	1	5/23/2019 3:10:44 PM	44966
Surr: Phenol-d5	45.9	0	15-84.6		%Rec	1	5/23/2019 3:10:44 PM	44966
Surr: 2,4,6-Tribromophenol	71.3	0	27.8-112		%Rec	1	5/23/2019 3:10:44 PM	44966
Surr: Nitrobenzene-d5	82.6	0	33-113		%Rec	1	5/23/2019 3:10:44 PM	44966
Surr: 2-Fluorobiphenyl	64.2	0	26.6-107		%Rec	1	5/23/2019 3:10:44 PM	44966
Surr: 4-Terphenyl-d14	79.3	0	18.7-148		%Rec	1	5/23/2019 3:10:44 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Toluene	ND	0.35	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Methyl tert-butyl ether (MTBE)	300	2.3	5.0		µg/L	5	5/15/2019 10:26:44 PM	W5990
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Naphthalene	ND	0.28	2.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/16/2019 12:47:45 PM	W5992

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-005
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Acetone	ND	1.2	10		µg/L	1	5/16/2019 12:47:45 PM	W5992
Bromobenzene	ND	0.24	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Bromoform	ND	0.29	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Bromomethane	ND	0.27	3.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
2-Butanone	ND	2.1	10		µg/L	1	5/16/2019 12:47:45 PM	W5992
Carbon disulfide	ND	0.45	10		µg/L	1	5/16/2019 12:47:45 PM	W5992
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Chloroethane	ND	0.18	2.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Chloroform	ND	0.12	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Chloromethane	ND	0.32	3.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Dibromomethane	ND	0.21	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
2-Hexanone	ND	1.5	10		µg/L	1	5/16/2019 12:47:45 PM	W5992
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2019 12:47:45 PM	W5992
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-005 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2019 12:47:45 PM	W5992
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/16/2019 12:47:45 PM	W5992
Surr: 1,2-Dichloroethane-d4	85.4	0	70-130		%Rec	1	5/16/2019 12:47:45 PM	W5992
Surr: 4-Bromofluorobenzene	89.9	0	70-130		%Rec	1	5/16/2019 12:47:45 PM	W5992
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	1	5/16/2019 12:47:45 PM	W5992
Surr: Toluene-d8	87.4	0	70-130		%Rec	1	5/16/2019 12:47:45 PM	W5992
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.21	0.031	0.050		mg/L	1	5/16/2019 12:47:45 PM	G59927
Surr: BFB	97.5	0	70-130		%Rec	1	5/16/2019 12:47:45 PM	G59927

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-006 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/16/2019 3:50:41 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/15/2019 12:09:12 PM	44901
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2019 12:09:12 PM	44901
Surr: DNOP	116	0	70-130		%Rec	1	5/15/2019 12:09:12 PM	44901
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.32	0.25	0.50	J	mg/L	5	5/10/2019 2:15:53 PM	R59794
Chloride	110	1.2	10		mg/L	20	5/10/2019 2:28:18 PM	R59794
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/10/2019 2:15:53 PM	R59794
Bromide	0.70	0.089	0.50		mg/L	5	5/10/2019 2:15:53 PM	R59794
Nitrogen, Nitrate (As N)	0.15	0.027	0.50	J	mg/L	5	5/10/2019 2:15:53 PM	R59794
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/10/2019 2:15:53 PM	R59794
Sulfate	220	0.27	2.5		mg/L	5	5/10/2019 2:15:53 PM	R59794
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0041	0.0025	0.020	J	mg/L	1	5/28/2019 7:55:16 PM	A60216
Barium	0.053	0.00065	0.0020		mg/L	1	5/28/2019 7:55:16 PM	A60216
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 7:55:16 PM	A60216
Boron	0.48	0.0045	0.040		mg/L	1	5/28/2019 7:55:16 PM	A60216
Cadmium	ND	0.00055	0.0020		mg/L	1	5/28/2019 7:55:16 PM	A60216
Calcium	77	0.062	1.0		mg/L	1	5/28/2019 7:55:16 PM	A60216
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 7:55:16 PM	A60216
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 7:55:16 PM	A60216
Copper	ND	0.0013	0.0060		mg/L	1	5/28/2019 7:55:16 PM	A60216
Iron	0.010	0.0087	0.020	J	mg/L	1	5/28/2019 7:55:16 PM	A60216
Magnesium	18	0.050	1.0		mg/L	1	5/28/2019 7:55:16 PM	A60216
Manganese	0.11	0.00029	0.0020	*	mg/L	1	5/28/2019 7:55:16 PM	A60216
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 7:55:16 PM	A60216
Nickel	0.0048	0.0040	0.010	J	mg/L	1	5/28/2019 7:55:16 PM	A60216
Potassium	0.78	0.16	1.0	J	mg/L	1	5/28/2019 7:55:16 PM	A60216
Silver	ND	0.00094	0.0050		mg/L	1	5/28/2019 7:55:16 PM	A60216
Sodium	320	2.1	5.0		mg/L	5	5/28/2019 7:57:25 PM	A60216
Zinc	0.0092	0.0023	0.010	J	mg/L	1	5/28/2019 7:55:16 PM	A60216
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	8.8	0.025	0.20	*	mg/L	10	5/28/2019 12:53:06 PM	45106
Barium	0.20	0.00065	0.0020		mg/L	1	5/23/2019 10:22:11 PM	45106
Beryllium	0.00051	0.00028	0.0020	J	mg/L	1	5/23/2019 10:22:11 PM	45106
Boron	0.52	0.0045	0.040		mg/L	1	5/23/2019 10:22:11 PM	45106

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-006
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 10:22:11 PM	45106
Chromium	0.0029	0.0015	0.0060	J	mg/L	1	5/23/2019 10:22:11 PM	45106
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 10:22:11 PM	45106
Copper	ND	0.0041	0.0060		mg/L	1	5/23/2019 10:22:11 PM	45106
Iron	3.6	0.087	0.20	*	mg/L	10	5/28/2019 12:53:06 PM	45106
Manganese	0.26	0.00029	0.0020	*	mg/L	1	5/23/2019 10:22:11 PM	45106
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 10:22:11 PM	45106
Nickel	0.0077	0.0040	0.010	J	mg/L	1	5/23/2019 10:22:11 PM	45106
Silver	ND	0.0014	0.0050		mg/L	1	5/23/2019 10:22:11 PM	45106
Zinc	0.018	0.0058	0.010		mg/L	1	5/23/2019 10:22:11 PM	45106
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 4:03:17 PM	C59847
Arsenic	ND	0.00050	0.0050		mg/L	5	5/13/2019 4:03:17 PM	C59847
Lead	ND	0.00027	0.0025		mg/L	5	5/13/2019 4:03:17 PM	C59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 4:03:17 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 4:03:17 PM	C59847
Uranium	0.033	0.00037	0.0025	*	mg/L	5	5/13/2019 4:03:17 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00040	0.00039	0.0010	J	mg/L	1	5/22/2019 3:39:06 PM	45106
Arsenic	0.0011	0.00031	0.0010		mg/L	1	5/22/2019 3:39:06 PM	45106
Lead	0.0039	0.000055	0.00050		mg/L	1	5/22/2019 3:39:06 PM	45106
Selenium	ND	0.00048	0.0010		mg/L	1	5/22/2019 3:39:06 PM	45106
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 3:39:06 PM	45106
Uranium	0.034	0.00042	0.0025	*	mg/L	5	5/22/2019 5:02:32 PM	45106
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	5/22/2019 12:51:49 PM	45093
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/23/2019 3:40:20 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-006
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/23/2019 3:40:20 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/23/2019 3:40:20 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/23/2019 3:40:20 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/23/2019 3:40:20 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/23/2019 3:40:20 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/23/2019 3:40:20 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/23/2019 3:40:20 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/23/2019 3:40:20 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/23/2019 3:40:20 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/23/2019 3:40:20 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-006
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/23/2019 3:40:20 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/23/2019 3:40:20 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/23/2019 3:40:20 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Naphthalene	ND	4.1	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 3:40:20 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 3:40:20 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/23/2019 3:40:20 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/23/2019 3:40:20 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/23/2019 3:40:20 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/23/2019 3:40:20 PM	44966
Surr: 2-Fluorophenol	63.0	0	15-101		%Rec	1	5/23/2019 3:40:20 PM	44966
Surr: Phenol-d5	47.9	0	15-84.6		%Rec	1	5/23/2019 3:40:20 PM	44966
Surr: 2,4,6-Tribromophenol	77.3	0	27.8-112		%Rec	1	5/23/2019 3:40:20 PM	44966
Surr: Nitrobenzene-d5	81.7	0	33-113		%Rec	1	5/23/2019 3:40:20 PM	44966
Surr: 2-Fluorobiphenyl	66.6	0	26.6-107		%Rec	1	5/23/2019 3:40:20 PM	44966
Surr: 4-Terphenyl-d14	81.7	0	18.7-148		%Rec	1	5/23/2019 3:40:20 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.27	0.17	1.0	J	µg/L	1	5/16/2019 1:16:24 PM	W5992
Toluene	ND	0.35	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Methyl tert-butyl ether (MTBE)	440	2.3	5.0		µg/L	5	5/15/2019 11:23:50 PM	W5990
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Naphthalene	ND	0.28	2.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/16/2019 1:16:24 PM	W5992

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-006
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Acetone	ND	1.2	10		µg/L	1	5/16/2019 1:16:24 PM	W5992
Bromobenzene	ND	0.24	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Bromoform	ND	0.29	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Bromomethane	ND	0.27	3.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
2-Butanone	ND	2.1	10		µg/L	1	5/16/2019 1:16:24 PM	W5992
Carbon disulfide	ND	0.45	10		µg/L	1	5/16/2019 1:16:24 PM	W5992
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Chloroethane	ND	0.18	2.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Chloroform	ND	0.12	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Chloromethane	ND	0.32	3.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Dibromomethane	ND	0.21	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
2-Hexanone	ND	1.5	10		µg/L	1	5/16/2019 1:16:24 PM	W5992
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2019 1:16:24 PM	W5992
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 10:16:00 AM
Lab ID: 1905520-006 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2019 1:16:24 PM	W5992
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/16/2019 1:16:24 PM	W5992
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	1	5/16/2019 1:16:24 PM	W5992
Surr: 4-Bromofluorobenzene	87.6	0	70-130		%Rec	1	5/16/2019 1:16:24 PM	W5992
Surr: Dibromofluoromethane	98.3	0	70-130		%Rec	1	5/16/2019 1:16:24 PM	W5992
Surr: Toluene-d8	88.3	0	70-130		%Rec	1	5/16/2019 1:16:24 PM	W5992
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.31	0.031	0.050		mg/L	1	5/16/2019 1:16:24 PM	G59927
Surr: BFB	94.5	0	70-130		%Rec	1	5/16/2019 1:16:24 PM	G59927

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 11:20:00 AM
Lab ID: 1905520-007
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/16/2019 4:20:49 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.6	0.35	1.0		mg/L	1	5/15/2019 12:31:12 PM	44901
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2019 12:31:12 PM	44901
Surr: DNOP	123	0	70-130		%Rec	1	5/15/2019 12:31:12 PM	44901
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.39	0.25	0.50	J	mg/L	5	5/10/2019 2:40:43 PM	R59794
Chloride	170	1.2	10		mg/L	20	5/10/2019 2:53:07 PM	R59794
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/10/2019 2:40:43 PM	R59794
Bromide	1.1	0.089	0.50		mg/L	5	5/10/2019 2:40:43 PM	R59794
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/10/2019 2:40:43 PM	R59794
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/10/2019 2:40:43 PM	R59794
Sulfate	13	0.27	2.5		mg/L	5	5/10/2019 2:40:43 PM	R59794
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.031	0.0025	0.020		mg/L	1	5/24/2019 2:15:14 PM	B60186
Barium	1.1	0.0032	0.010		mg/L	5	5/24/2019 2:19:28 PM	B60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 2:15:14 PM	B60186
Boron	0.43	0.0045	0.040		mg/L	1	5/24/2019 2:15:14 PM	B60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 2:15:14 PM	B60186
Calcium	140	0.31	5.0		mg/L	5	5/24/2019 2:19:28 PM	B60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 2:15:14 PM	B60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 2:15:14 PM	B60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 2:15:14 PM	B60186
Iron	7.3	0.087	0.20	*	mg/L	10	5/24/2019 2:28:19 PM	B60186
Magnesium	28	0.050	1.0		mg/L	1	5/24/2019 2:15:14 PM	B60186
Manganese	2.6	0.0014	0.010	*	mg/L	5	5/24/2019 2:19:28 PM	B60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 2:15:14 PM	B60186
Nickel	ND	0.0040	0.010		mg/L	1	5/24/2019 2:15:14 PM	B60186
Potassium	0.88	0.16	1.0	J	mg/L	1	5/24/2019 2:15:14 PM	B60186
Silver	0.0014	0.00094	0.0050	J	mg/L	1	5/24/2019 2:15:14 PM	B60186
Sodium	290	2.1	5.0		mg/L	5	5/24/2019 2:19:28 PM	B60186
Zinc	0.0081	0.0023	0.010	J	mg/L	1	5/24/2019 2:15:14 PM	B60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	12	0.050	0.40	*	mg/L	20	5/28/2019 1:04:11 PM	45106
Barium	1.9	0.0032	0.010		mg/L	5	5/23/2019 10:38:23 PM	45106
Beryllium	0.00086	0.00028	0.0020	J	mg/L	1	5/23/2019 10:36:25 PM	45106
Boron	0.43	0.0045	0.040		mg/L	1	5/23/2019 10:36:25 PM	45106

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 11:20:00 AM
Lab ID: 1905520-007
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 10:36:25 PM	45106
Chromium	0.0026	0.0015	0.0060	J	mg/L	1	5/23/2019 10:36:25 PM	45106
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 10:36:25 PM	45106
Copper	ND	0.0041	0.0060		mg/L	1	5/23/2019 10:36:25 PM	45106
Iron	11	0.17	0.40	*	mg/L	20	5/28/2019 1:04:11 PM	45106
Manganese	3.1	0.0014	0.010	*	mg/L	5	5/23/2019 10:38:23 PM	45106
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 10:36:25 PM	45106
Nickel	0.0075	0.0040	0.010	J	mg/L	1	5/23/2019 10:36:25 PM	45106
Silver	0.0022	0.0014	0.0050	J	mg/L	1	5/23/2019 10:36:25 PM	45106
Zinc	0.024	0.0058	0.010		mg/L	1	5/23/2019 10:36:25 PM	45106
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 4:06:23 PM	C59847
Arsenic	0.0015	0.00050	0.0050	J	mg/L	5	5/13/2019 4:06:23 PM	C59847
Lead	ND	0.00027	0.0025		mg/L	5	5/13/2019 4:06:23 PM	C59847
Selenium	0.0010	0.00086	0.0050	J	mg/L	5	5/13/2019 4:06:23 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 4:06:23 PM	C59847
Uranium	0.0024	0.00037	0.0025	J	mg/L	5	5/13/2019 4:06:23 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/22/2019 3:41:18 PM	45106
Arsenic	0.0018	0.00031	0.0010		mg/L	1	5/22/2019 3:41:18 PM	45106
Lead	0.0066	0.000055	0.00050		mg/L	1	5/22/2019 3:41:18 PM	45106
Selenium	0.00099	0.00048	0.0010	J	mg/L	1	5/22/2019 3:41:18 PM	45106
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 3:41:18 PM	45106
Uranium	0.0022	0.000085	0.00050		mg/L	1	5/22/2019 3:41:18 PM	45106
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/22/2019 12:54:05 PM	45093
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/23/2019 4:09:54 PM	44966

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 11:20:00 AM
Lab ID: 1905520-007
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/23/2019 4:09:54 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/23/2019 4:09:54 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Carbazole	4.7	2.9	10	J	µg/L	1	5/23/2019 4:09:54 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/23/2019 4:09:54 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/23/2019 4:09:54 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/23/2019 4:09:54 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/23/2019 4:09:54 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/23/2019 4:09:54 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/23/2019 4:09:54 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/23/2019 4:09:54 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Fluorene	6.0	2.9	10	J	µg/L	1	5/23/2019 4:09:54 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 11:20:00 AM
Lab ID: 1905520-007
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	40	3.1	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/23/2019 4:09:54 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/23/2019 4:09:54 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/23/2019 4:09:54 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Naphthalene	8.6	4.1	10	J	µg/L	1	5/23/2019 4:09:54 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 4:09:54 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 4:09:54 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/23/2019 4:09:54 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Phenol	22	8.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/23/2019 4:09:54 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/23/2019 4:09:54 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/23/2019 4:09:54 PM	44966
Surr: 2-Fluorophenol	54.2	0	15-101		%Rec	1	5/23/2019 4:09:54 PM	44966
Surr: Phenol-d5	39.1	0	15-84.6		%Rec	1	5/23/2019 4:09:54 PM	44966
Surr: 2,4,6-Tribromophenol	72.5	0	27.8-112		%Rec	1	5/23/2019 4:09:54 PM	44966
Surr: Nitrobenzene-d5	72.4	0	33-113		%Rec	1	5/23/2019 4:09:54 PM	44966
Surr: 2-Fluorobiphenyl	53.6	0	26.6-107		%Rec	1	5/23/2019 4:09:54 PM	44966
Surr: 4-Terphenyl-d14	76.9	0	18.7-148		%Rec	1	5/23/2019 4:09:54 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3500	33	200		µg/L	200	5/15/2019 11:52:24 PM	W5990
Toluene	9.1	7.0	20	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
Ethylbenzene	330	2.6	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Methyl tert-butyl ether (MTBE)	3300	9.1	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2,4-Trimethylbenzene	6.3	4.3	20	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Naphthalene	15	5.5	40	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
1-Methylnaphthalene	70	6.3	80	J	µg/L	20	5/16/2019 12:21:04 AM	W5990

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 11:20:00 AM
Lab ID: 1905520-007
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	6.9	80		µg/L	20	5/16/2019 12:21:04 AM	W5990
Acetone	ND	24	200		µg/L	20	5/16/2019 12:21:04 AM	W5990
Bromobenzene	ND	4.9	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Bromodichloromethane	ND	2.7	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Bromoform	ND	5.8	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Bromomethane	ND	5.5	60		µg/L	20	5/16/2019 12:21:04 AM	W5990
2-Butanone	ND	42	200		µg/L	20	5/16/2019 12:21:04 AM	W5990
Carbon disulfide	ND	9.1	200		µg/L	20	5/16/2019 12:21:04 AM	W5990
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Chlorobenzene	ND	3.9	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Chloroethane	ND	3.6	40		µg/L	20	5/16/2019 12:21:04 AM	W5990
Chloroform	ND	2.4	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Chloromethane	ND	6.4	60		µg/L	20	5/16/2019 12:21:04 AM	W5990
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
cis-1,2-DCE	12	3.8	20	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/16/2019 12:21:04 AM	W5990
Dibromochloromethane	ND	4.8	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Dibromomethane	ND	4.2	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,1-Dichloroethane	11	2.8	20	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
1,1-Dichloroethene	15	4.1	20	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
2-Hexanone	ND	31	200		µg/L	20	5/16/2019 12:21:04 AM	W5990
Isopropylbenzene	15	3.8	20	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
4-Isopropyltoluene	ND	4.3	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/16/2019 12:21:04 AM	W5990
Methylene Chloride	ND	3.1	60		µg/L	20	5/16/2019 12:21:04 AM	W5990
n-Butylbenzene	9.3	4.6	60	J	µg/L	20	5/16/2019 12:21:04 AM	W5990
n-Propylbenzene	35	4.3	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
sec-Butylbenzene	6.0	5.0	20	J	µg/L	20	5/16/2019 12:21:04 AM	W5990

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 11:20:00 AM
Lab ID: 1905520-007
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	3.8	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/16/2019 12:21:04 AM	W5990
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/16/2019 12:21:04 AM	W5990
Vinyl chloride	ND	3.6	20		µg/L	20	5/16/2019 12:21:04 AM	W5990
Xylenes, Total	ND	9.1	30		µg/L	20	5/16/2019 12:21:04 AM	W5990
Surr: 1,2-Dichloroethane-d4	86.5	0	70-130		%Rec	20	5/16/2019 12:21:04 AM	W5990
Surr: 4-Bromofluorobenzene	93.4	0	70-130		%Rec	20	5/16/2019 12:21:04 AM	W5990
Surr: Dibromofluoromethane	98.9	0	70-130		%Rec	20	5/16/2019 12:21:04 AM	W5990
Surr: Toluene-d8	84.7	0	70-130		%Rec	20	5/16/2019 12:21:04 AM	W5990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	11	0.61	1.0		mg/L	20	5/16/2019 12:21:04 AM	R59906
Surr: BFB	95.2	0	70-130		%Rec	20	5/16/2019 12:21:04 AM	R59906

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 12:28:00 PM
Lab ID: 1905520-008
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	63	0.35	1.0		mg/L	1	5/15/2019 12:53:16 PM	44901
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2019 12:53:16 PM	44901
Surr: DNOP	123	0	70-130		%Rec	1	5/15/2019 12:53:16 PM	44901
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/10/2019 4:32:27 PM	R59794
Chloride	400	1.2	10		mg/L	20	5/10/2019 4:44:52 PM	R59794
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/10/2019 4:32:27 PM	R59794
Bromide	0.53	0.089	0.50		mg/L	5	5/10/2019 4:32:27 PM	R59794
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/10/2019 4:32:27 PM	R59794
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/10/2019 4:32:27 PM	R59794
Sulfate	1.1	0.27	2.5	J	mg/L	5	5/10/2019 4:32:27 PM	R59794
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.051	0.0025	0.020		mg/L	1	5/24/2019 2:30:39 PM	A60186
Barium	5.5	0.013	0.040	*	mg/L	20	5/24/2019 2:34:51 PM	A60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 2:30:39 PM	A60186
Boron	0.17	0.0045	0.040		mg/L	1	5/24/2019 2:30:39 PM	A60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 2:30:39 PM	A60186
Calcium	280	0.31	5.0		mg/L	5	5/24/2019 2:32:44 PM	A60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 2:30:39 PM	A60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 2:30:39 PM	A60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 2:30:39 PM	A60186
Iron	25	0.44	1.0	*	mg/L	50	5/28/2019 7:59:40 PM	A60216
Magnesium	52	0.050	1.0		mg/L	1	5/24/2019 2:30:39 PM	A60186
Manganese	5.3	0.0058	0.040	*	mg/L	20	5/24/2019 2:34:51 PM	A60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 2:30:39 PM	A60186
Nickel	0.0040	0.0040	0.010	J	mg/L	1	5/24/2019 2:30:39 PM	A60186
Potassium	0.21	0.16	1.0	J	mg/L	1	5/24/2019 2:30:39 PM	A60186
Silver	0.0025	0.00094	0.0050	J	mg/L	1	5/24/2019 2:30:39 PM	A60186
Sodium	210	2.1	5.0		mg/L	5	5/24/2019 2:32:44 PM	A60186
Zinc	0.012	0.0023	0.010		mg/L	1	5/24/2019 2:30:39 PM	A60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	20	0.12	1.0	*	mg/L	50	5/28/2019 1:08:35 PM	45106
Barium	6.4	0.0065	0.020	*	mg/L	10	5/28/2019 1:06:26 PM	45106
Beryllium	0.0018	0.00028	0.0020	J	mg/L	1	5/23/2019 10:40:32 PM	45106
Boron	0.18	0.0045	0.040		mg/L	1	5/23/2019 10:40:32 PM	45106
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 10:40:32 PM	45106
Chromium	ND	0.0015	0.0060		mg/L	1	5/23/2019 10:40:32 PM	45106
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 10:40:32 PM	45106

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PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 12:28:00 PM
Lab ID: 1905520-008
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	0.0068	0.0041	0.0060		mg/L	1	5/23/2019 10:40:32 PM	45106
Iron	35	0.44	1.0	*	mg/L	50	5/28/2019 1:08:35 PM	45106
Manganese	6.1	0.0029	0.020	*	mg/L	10	5/28/2019 1:06:26 PM	45106
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 10:40:32 PM	45106
Nickel	0.012	0.0040	0.010		mg/L	1	5/23/2019 10:40:32 PM	45106
Silver	0.0021	0.0014	0.0050	J	mg/L	1	5/23/2019 10:40:32 PM	45106
Zinc	0.022	0.0058	0.010		mg/L	1	5/23/2019 10:40:32 PM	45106
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 4:09:05 PM	C59847
Arsenic	0.0039	0.00050	0.0050	J	mg/L	5	5/13/2019 4:09:05 PM	C59847
Lead	0.00040	0.00027	0.0025	J	mg/L	5	5/13/2019 4:09:05 PM	C59847
Selenium	0.0011	0.00086	0.0050	J	mg/L	5	5/13/2019 4:09:05 PM	C59847
Thallium	ND	0.00024	0.0025		mg/L	5	5/13/2019 4:09:05 PM	C59847
Uranium	0.00044	0.00037	0.0025	J	mg/L	5	5/13/2019 4:09:05 PM	C59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/22/2019 3:43:29 PM	45106
Arsenic	0.0057	0.00031	0.0010		mg/L	1	5/22/2019 3:43:29 PM	45106
Lead	0.016	0.000055	0.00050	*	mg/L	1	5/22/2019 3:43:29 PM	45106
Selenium	0.0017	0.00048	0.0010		mg/L	1	5/22/2019 3:43:29 PM	45106
Thallium	0.00010	0.000052	0.00050	J	mg/L	1	5/22/2019 3:43:29 PM	45106
Uranium	0.0010	0.000085	0.00050		mg/L	1	5/22/2019 3:43:29 PM	45106
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	5/22/2019 12:56:22 PM	45093
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Acenaphthylene	ND	12	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Aniline	ND	18	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Anthracene	ND	13	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Azobenzene	ND	16	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Benz(a)anthracene	ND	18	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Benzo(a)pyrene	ND	18	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Benzoic acid	ND	54	100		µg/L	1	5/23/2019 4:39:27 PM	44966
Benzyl alcohol	ND	12	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/23/2019 4:39:27 PM	44966

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 12:28:00 PM
Lab ID: 1905520-008
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Bis(2-ethylhexyl)phthalate	25	22	50	J	µg/L	1	5/23/2019 4:39:27 PM	44966
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Carbazole	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/23/2019 4:39:27 PM	44966
4-Chloroaniline	ND	11	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2-Chloronaphthalene	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2-Chlorophenol	ND	13	50		µg/L	1	5/23/2019 4:39:27 PM	44966
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Chrysene	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Dibenzofuran	ND	16	50		µg/L	1	5/23/2019 4:39:27 PM	44966
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/23/2019 4:39:27 PM	44966
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/23/2019 4:39:27 PM	44966
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/23/2019 4:39:27 PM	44966
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Diethyl phthalate	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Dimethyl phthalate	ND	16	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/23/2019 4:39:27 PM	44966
2,4-Dimethylphenol	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/23/2019 4:39:27 PM	44966
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/23/2019 4:39:27 PM	44966
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Fluoranthene	ND	12	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Fluorene	44	14	50	J	µg/L	1	5/23/2019 4:39:27 PM	44966
Hexachlorobenzene	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Hexachlorobutadiene	ND	24	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Hexachloroethane	ND	24	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Isophorone	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
1-Methylnaphthalene	230	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2-Methylnaphthalene	180	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2-Methylphenol	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 12:28:00 PM
Lab ID: 1905520-008 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	18	50		µg/L	1	5/23/2019 4:39:27 PM	44966
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/23/2019 4:39:27 PM	44966
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/23/2019 4:39:27 PM	44966
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Naphthalene	140	21	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2-Nitroaniline	ND	16	50		µg/L	1	5/23/2019 4:39:27 PM	44966
3-Nitroaniline	ND	16	50		µg/L	1	5/23/2019 4:39:27 PM	44966
4-Nitroaniline	ND	13	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Nitrobenzene	ND	14	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2-Nitrophenol	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
4-Nitrophenol	ND	38	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Pentachlorophenol	ND	14	100		µg/L	1	5/23/2019 4:39:27 PM	44966
Phenanthrene	48	14	50	J	µg/L	1	5/23/2019 4:39:27 PM	44966
Phenol	ND	40	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Pyrene	19	13	50	J	µg/L	1	5/23/2019 4:39:27 PM	44966
Pyridine	ND	48	50		µg/L	1	5/23/2019 4:39:27 PM	44966
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/23/2019 4:39:27 PM	44966
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/23/2019 4:39:27 PM	44966
Surr: 2-Fluorophenol	45.8	0	15-101		%Rec	1	5/23/2019 4:39:27 PM	44966
Surr: Phenol-d5	36.6	0	15-84.6		%Rec	1	5/23/2019 4:39:27 PM	44966
Surr: 2,4,6-Tribromophenol	75.2	0	27.8-112		%Rec	1	5/23/2019 4:39:27 PM	44966
Surr: Nitrobenzene-d5	71.2	0	33-113		%Rec	1	5/23/2019 4:39:27 PM	44966
Surr: 2-Fluorobiphenyl	59.0	0	26.6-107		%Rec	1	5/23/2019 4:39:27 PM	44966
Surr: 4-Terphenyl-d14	77.2	0	18.7-148		%Rec	1	5/23/2019 4:39:27 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3200	33	200		µg/L	200	5/16/2019 12:49:47 AM	W5990
Toluene	120	7.0	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Ethylbenzene	320	2.6	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Methyl tert-butyl ether (MTBE)	480	9.1	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2,4-Trimethylbenzene	390	4.3	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,3,5-Trimethylbenzene	120	3.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Naphthalene	170	5.5	40		µg/L	20	5/16/2019 1:18:36 AM	W5990
1-Methylnaphthalene	110	6.3	80		µg/L	20	5/16/2019 1:18:36 AM	W5990
2-Methylnaphthalene	120	6.9	80		µg/L	20	5/16/2019 1:18:36 AM	W5990
Acetone	ND	24	200		µg/L	20	5/16/2019 1:18:36 AM	W5990
Bromobenzene	ND	4.9	20		µg/L	20	5/16/2019 1:18:36 AM	W5990

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 12:28:00 PM
Lab ID: 1905520-008 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	2.7	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Bromoform	ND	5.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Bromomethane	ND	5.5	60		µg/L	20	5/16/2019 1:18:36 AM	W5990
2-Butanone	ND	42	200		µg/L	20	5/16/2019 1:18:36 AM	W5990
Carbon disulfide	ND	9.1	200		µg/L	20	5/16/2019 1:18:36 AM	W5990
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Chlorobenzene	ND	3.9	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Chloroethane	ND	3.6	40		µg/L	20	5/16/2019 1:18:36 AM	W5990
Chloroform	ND	2.4	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Chloromethane	ND	6.4	60		µg/L	20	5/16/2019 1:18:36 AM	W5990
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
cis-1,2-DCE	ND	3.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/16/2019 1:18:36 AM	W5990
Dibromochloromethane	ND	4.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Dibromomethane	ND	4.2	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,1-Dichloroethane	ND	2.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,1-Dichloroethene	ND	4.1	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
2-Hexanone	ND	31	200		µg/L	20	5/16/2019 1:18:36 AM	W5990
Isopropylbenzene	14	3.8	20	J	µg/L	20	5/16/2019 1:18:36 AM	W5990
4-Isopropyltoluene	5.3	4.3	20	J	µg/L	20	5/16/2019 1:18:36 AM	W5990
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/16/2019 1:18:36 AM	W5990
Methylene Chloride	ND	3.1	60		µg/L	20	5/16/2019 1:18:36 AM	W5990
n-Butylbenzene	ND	4.6	60		µg/L	20	5/16/2019 1:18:36 AM	W5990
n-Propylbenzene	21	4.3	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
sec-Butylbenzene	ND	5.0	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Styrene	ND	3.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/16/2019 1:18:36 AM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 12:28:00 PM
Lab ID: 1905520-008 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/16/2019 1:18:36 AM	W5990
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/16/2019 1:18:36 AM	W5990
Vinyl chloride	ND	3.6	20		µg/L	20	5/16/2019 1:18:36 AM	W5990
Xylenes, Total	2600	9.1	30		µg/L	20	5/16/2019 1:18:36 AM	W5990
Surr: 1,2-Dichloroethane-d4	88.4	0	70-130		%Rec	20	5/16/2019 1:18:36 AM	W5990
Surr: 4-Bromofluorobenzene	90.1	0	70-130		%Rec	20	5/16/2019 1:18:36 AM	W5990
Surr: Dibromofluoromethane	98.9	0	70-130		%Rec	20	5/16/2019 1:18:36 AM	W5990
Surr: Toluene-d8	87.5	0	70-130		%Rec	20	5/16/2019 1:18:36 AM	W5990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	19	0.61	1.0		mg/L	20	5/16/2019 1:18:36 AM	R59906
Surr: BFB	98.6	0	70-130		%Rec	20	5/16/2019 1:18:36 AM	R59906

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 1:00:00 PM
Lab ID: 1905520-009
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/16/2019 4:35:46 PM	44954
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	7.6	0.35	1.0		mg/L	1	5/15/2019 1:15:21 PM	44901
Motor Oil Range Organics (MRO)	5.0	5.0	5.0		mg/L	1	5/15/2019 1:15:21 PM	44901
Surr: DNOP	125	0	70-130		%Rec	1	5/15/2019 1:15:21 PM	44901
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.71	0.25	0.50		mg/L	5	5/16/2019 2:00:32 PM	R59960
Chloride	100	1.2	10		mg/L	20	5/10/2019 5:09:40 PM	R59794
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/10/2019 4:57:16 PM	R59794
Bromide	1.3	0.089	0.50		mg/L	5	5/10/2019 4:57:16 PM	R59794
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/10/2019 4:57:16 PM	R59794
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/10/2019 4:57:16 PM	R59794
Sulfate	15	0.27	2.5		mg/L	5	5/10/2019 4:57:16 PM	R59794
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 2:36:57 PM	B60186
Barium	0.96	0.00065	0.0020		mg/L	1	5/24/2019 2:36:57 PM	B60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 2:36:57 PM	B60186
Boron	0.31	0.0045	0.040		mg/L	1	5/24/2019 2:36:57 PM	B60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 2:36:57 PM	B60186
Calcium	130	0.31	5.0		mg/L	5	5/24/2019 2:39:10 PM	B60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 2:36:57 PM	B60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 2:36:57 PM	B60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 2:36:57 PM	B60186
Iron	0.27	0.0087	0.020		mg/L	1	5/24/2019 2:36:57 PM	B60186
Magnesium	27	0.050	1.0		mg/L	1	5/24/2019 2:36:57 PM	B60186
Manganese	3.0	0.0014	0.010	*	mg/L	5	5/24/2019 2:39:10 PM	B60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 2:36:57 PM	B60186
Nickel	ND	0.0040	0.010		mg/L	1	5/24/2019 2:36:57 PM	B60186
Potassium	0.53	0.16	1.0	J	mg/L	1	5/24/2019 2:36:57 PM	B60186
Silver	0.0023	0.00094	0.0050	J	mg/L	1	5/24/2019 2:36:57 PM	B60186
Sodium	260	2.1	5.0		mg/L	5	5/24/2019 2:39:10 PM	B60186
Zinc	0.010	0.0023	0.010		mg/L	1	5/24/2019 2:36:57 PM	B60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.9	0.025	0.20	*	mg/L	10	5/28/2019 1:10:50 PM	45106
Barium	1.1	0.0032	0.010		mg/L	5	5/23/2019 10:46:41 PM	45106
Beryllium	0.00036	0.00028	0.0020	J	mg/L	1	5/23/2019 10:44:42 PM	45106
Boron	0.35	0.0045	0.040		mg/L	1	5/23/2019 10:44:42 PM	45106

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 1:00:00 PM
Lab ID: 1905520-009
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/23/2019 10:44:42 PM	45106
Chromium	0.0018	0.0015	0.0060	J	mg/L	1	5/23/2019 10:44:42 PM	45106
Cobalt	ND	0.0031	0.0060		mg/L	1	5/23/2019 10:44:42 PM	45106
Copper	0.0067	0.0041	0.0060		mg/L	1	5/23/2019 10:44:42 PM	45106
Iron	5.4	0.087	0.20	*	mg/L	10	5/28/2019 1:10:50 PM	45106
Manganese	3.1	0.0014	0.010	*	mg/L	5	5/23/2019 10:46:41 PM	45106
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/23/2019 10:44:42 PM	45106
Nickel	0.0062	0.0040	0.010	J	mg/L	1	5/23/2019 10:44:42 PM	45106
Silver	0.0025	0.0014	0.0050	J	mg/L	1	5/23/2019 10:44:42 PM	45106
Zinc	0.032	0.0058	0.010		mg/L	1	5/23/2019 10:44:42 PM	45106
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/13/2019 4:36:19 PM	D59847
Arsenic	0.0035	0.00050	0.0050	J	mg/L	5	5/13/2019 4:36:19 PM	D59847
Lead	ND	0.00027	0.0025		mg/L	5	5/13/2019 4:36:19 PM	D59847
Selenium	ND	0.00086	0.0050		mg/L	5	5/13/2019 4:36:19 PM	D59847
Thallium	0.00026	0.00024	0.0025	J	mg/L	5	5/13/2019 4:36:19 PM	D59847
Uranium	0.0037	0.00037	0.0025		mg/L	5	5/13/2019 4:36:19 PM	D59847
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.0084	0.00039	0.0010	*	mg/L	1	5/22/2019 3:45:41 PM	45106
Arsenic	0.0082	0.00031	0.0010		mg/L	1	5/22/2019 3:45:41 PM	45106
Lead	0.0031	0.000055	0.00050		mg/L	1	5/22/2019 3:45:41 PM	45106
Selenium	ND	0.00048	0.0010		mg/L	1	5/22/2019 3:45:41 PM	45106
Thallium	ND	0.000052	0.00050		mg/L	1	5/22/2019 3:45:41 PM	45106
Uranium	0.0044	0.000085	0.00050		mg/L	1	5/22/2019 3:45:41 PM	45106
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/22/2019 12:58:39 PM	45093
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/23/2019 5:09:04 PM	44966

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 1:00:00 PM
Lab ID: 1905520-009
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/23/2019 5:09:04 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/23/2019 5:09:04 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/23/2019 5:09:04 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/23/2019 5:09:04 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/23/2019 5:09:04 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/23/2019 5:09:04 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/23/2019 5:09:04 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/23/2019 5:09:04 PM	44966
2,4-Dimethylphenol	7.6	3.0	10	J	µg/L	1	5/23/2019 5:09:04 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/23/2019 5:09:04 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/23/2019 5:09:04 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Fluorene	4.5	2.9	10	J	µg/L	1	5/23/2019 5:09:04 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 1:00:00 PM
Lab ID: 1905520-009
Matrix: AQUEOUS
Received Date: 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	37	3.1	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2-Methylnaphthalene	21	3.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/23/2019 5:09:04 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/23/2019 5:09:04 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/23/2019 5:09:04 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Naphthalene	110	4.1	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 5:09:04 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 5:09:04 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/23/2019 5:09:04 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Phenol	21	8.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/23/2019 5:09:04 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/23/2019 5:09:04 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/23/2019 5:09:04 PM	44966
Surr: 2-Fluorophenol	56.7	0	15-101		%Rec	1	5/23/2019 5:09:04 PM	44966
Surr: Phenol-d5	43.8	0	15-84.6		%Rec	1	5/23/2019 5:09:04 PM	44966
Surr: 2,4,6-Tribromophenol	75.7	0	27.8-112		%Rec	1	5/23/2019 5:09:04 PM	44966
Surr: Nitrobenzene-d5	86.1	0	33-113		%Rec	1	5/23/2019 5:09:04 PM	44966
Surr: 2-Fluorobiphenyl	60.8	0	26.6-107		%Rec	1	5/23/2019 5:09:04 PM	44966
Surr: 4-Terphenyl-d14	84.0	0	18.7-148		%Rec	1	5/23/2019 5:09:04 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2200	8.3	50		µg/L	50	5/16/2019 1:47:22 AM	W5990
Toluene	2.2	1.8	5.0	J	µg/L	5	5/16/2019 2:16:12 AM	W5990
Ethylbenzene	490	0.66	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Methyl tert-butyl ether (MTBE)	4300	23	50		µg/L	50	5/16/2019 1:47:22 AM	W5990
1,2,4-Trimethylbenzene	190	1.1	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,3,5-Trimethylbenzene	17	0.94	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Naphthalene	150	1.4	10		µg/L	5	5/16/2019 2:16:12 AM	W5990
1-Methylnaphthalene	42	1.6	20		µg/L	5	5/16/2019 2:16:12 AM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 1:00:00 PM
Lab ID: 1905520-009 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	25	1.7	20		µg/L	5	5/16/2019 2:16:12 AM	W5990
Acetone	ND	6.0	50		µg/L	5	5/16/2019 2:16:12 AM	W5990
Bromobenzene	ND	1.2	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Bromoform	ND	1.4	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Bromomethane	ND	1.4	15		µg/L	5	5/16/2019 2:16:12 AM	W5990
2-Butanone	ND	10	50		µg/L	5	5/16/2019 2:16:12 AM	W5990
Carbon disulfide	ND	2.3	50		µg/L	5	5/16/2019 2:16:12 AM	W5990
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Chloroethane	ND	0.89	10		µg/L	5	5/16/2019 2:16:12 AM	W5990
Chloroform	ND	0.61	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Chloromethane	ND	1.6	15		µg/L	5	5/16/2019 2:16:12 AM	W5990
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/16/2019 2:16:12 AM	W5990
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Dibromomethane	ND	1.0	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
2-Hexanone	ND	7.7	50		µg/L	5	5/16/2019 2:16:12 AM	W5990
Isopropylbenzene	27	0.96	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/16/2019 2:16:12 AM	W5990
Methylene Chloride	ND	0.77	15		µg/L	5	5/16/2019 2:16:12 AM	W5990
n-Butylbenzene	2.7	1.1	15	J	µg/L	5	5/16/2019 2:16:12 AM	W5990
n-Propylbenzene	46	1.1	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
sec-Butylbenzene	3.1	1.2	5.0	J	µg/L	5	5/16/2019 2:16:12 AM	W5990

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2019 2nd QTR MKTF Wells
Collection Date: 5/9/2019 1:00:00 PM
Lab ID: 1905520-009 **Matrix:** AQUEOUS **Received Date:** 5/9/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.96	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/16/2019 2:16:12 AM	W5990
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/16/2019 2:16:12 AM	W5990
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/16/2019 2:16:12 AM	W5990
Xylenes, Total	150	2.3	7.5		µg/L	5	5/16/2019 2:16:12 AM	W5990
Surr: 1,2-Dichloroethane-d4	85.7	0	70-130		%Rec	5	5/16/2019 2:16:12 AM	W5990
Surr: 4-Bromofluorobenzene	95.7	0	70-130		%Rec	5	5/16/2019 2:16:12 AM	W5990
Surr: Dibromofluoromethane	98.4	0	70-130		%Rec	5	5/16/2019 2:16:12 AM	W5990
Surr: Toluene-d8	89.5	0	70-130		%Rec	5	5/16/2019 2:16:12 AM	W5990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	9.1	0.15	0.25		mg/L	5	5/16/2019 2:16:12 AM	R59906
Surr: BFB	96.2	0	70-130		%Rec	5	5/16/2019 2:16:12 AM	R59906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-45106** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45106** RunNo: **60089**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2029225** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	0.00038	0.0020								J
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45106** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45106** RunNo: **60089**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2029226** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	126	50	150			J
Barium	0.0020	0.0020	0.002000	0	97.6	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Boron	0.039	0.040	0.04000	0	98.3	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	111	50	150			
Chromium	0.0059	0.0060	0.006000	0	98.3	50	150			J
Cobalt	0.0050	0.0060	0.006000	0	84.0	50	150			J
Copper	0.0063	0.0060	0.006000	0	106	50	150			
Iron	0.020	0.020	0.02000	0	102	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0043	0.010	0.005000	0	86.9	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Zinc	0.011	0.010	0.01000	0	111	50	150			

Sample ID: **LCS-45106** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45106** RunNo: **60089**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2029227** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-45106** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45106** RunNo: **60089**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2029227** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	105	85	115			
Barium	0.47	0.0020	0.5000	0	94.3	85	115			
Beryllium	0.48	0.0020	0.5000	0	96.3	85	115			
Boron	0.49	0.040	0.5000	0	98.8	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.4	85	115			
Chromium	0.47	0.0060	0.5000	0	94.0	85	115			
Cobalt	0.45	0.0060	0.5000	0	90.2	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Iron	0.47	0.020	0.5000	0	93.0	85	115			
Manganese	0.47	0.0020	0.5000	0	93.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.4	85	115			
Nickel	0.46	0.010	0.5000	0	91.5	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.45	0.010	0.5000	0	91.0	85	115			

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A60216** RunNo: **60216**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0091	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **A60216** RunNo: **60216**

Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034197** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	102	50	150			J
Barium	0.0019	0.0020	0.002000	0	97.3	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.038	0.040	0.04000	0	95.7	50	150			J
Cadmium	0.0027	0.0020	0.002000	0	133	50	150			
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0067	0.0060	0.006000	0	112	50	150			
Cobalt	0.0036	0.0060	0.006000	0	59.5	50	150			J
Copper	0.0052	0.0060	0.006000	0	87.1	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.50	1.0	0.5000	0	99.2	50	150			J
Manganese	0.0019	0.0020	0.002000	0	97.0	50	150			J
Molybdenum	0.0044	0.0080	0.008000	0	54.7	50	150			J
Nickel	0.0028	0.010	0.005000	0	57.0	50	150			J
Potassium	0.46	1.0	0.5000	0	91.6	50	150			J
Silver	0.0040	0.0050	0.005000	0	79.8	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Zinc	0.0065	0.010	0.005000	0	131	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A60216** RunNo: **60216**

Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034198** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.49	0.020	0.5000	0	97.6	85	115			
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.48	0.0020	0.5000	0	96.7	85	115			
Boron	0.48	0.040	0.5000	0	95.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.49	0.0060	0.5000	0	98.8	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Magnesium	49	1.0	50.00	0	98.9	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.0	85	115			
Nickel	0.48	0.010	0.5000	0	95.9	85	115			
Potassium	49	1.0	50.00	0	97.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **A60216** RunNo: **60216**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034198** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	96.3	85	115			
Sodium	49	1.0	50.00	0	97.4	85	115			
Zinc	0.48	0.010	0.5000	0	96.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **a60186** RunNo: **60186**
Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033107** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0031	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **a60186** RunNo: **60186**
Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033108** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0093	0.020	0.01000	0	93.0	50	150			J
Barium	0.0019	0.0020	0.002000	0	95.6	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.038	0.040	0.04000	0	95.1	50	150			J
Cadmium	0.0023	0.0020	0.002000	0	114	50	150			
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Cobalt	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0055	0.0060	0.006000	0	91.2	50	150			J
Iron	0.016	0.020	0.02000	0	78.0	50	150			J
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0036	0.010	0.005000	0	71.8	50	150			J
Potassium	0.39	1.0	0.5000	0	78.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **a60186** RunNo: **60186**

Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033108** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0047	0.0050	0.005000	0	93.6	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Zinc	0.0049	0.010	0.005000	0	98.5	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **LCSW** Batch ID: **a60186** RunNo: **60186**

Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	96.3	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.4	85	115			
Boron	0.50	0.040	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.50	0.0060	0.5000	0	99.9	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Magnesium	49	1.0	50.00	0	97.6	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.7	85	115			
Nickel	0.48	0.010	0.5000	0	95.9	85	115			
Potassium	48	1.0	50.00	0	95.6	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	47	1.0	50.00	0	93.5	85	115			
Zinc	0.48	0.010	0.5000	0	96.5	85	115			

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **PBW** Batch ID: **B60186** RunNo: **60186**

Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033110** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60186** RunNo: **60186**
Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033110** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60186** RunNo: **60186**
Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033111** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	131	50	150			J
Barium	0.0019	0.0020	0.002000	0	94.3	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			
Boron	0.039	0.040	0.04000	0	96.6	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	86.5	50	150			J
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Chromium	0.0051	0.0060	0.006000	0	84.6	50	150			J
Cobalt	0.0064	0.0060	0.006000	0	107	50	150			
Copper	0.0053	0.0060	0.006000	0	87.9	50	150			J
Iron	0.016	0.020	0.02000	0	79.5	50	150			J
Magnesium	0.52	1.0	0.5000	0	103	50	150			J
Manganese	0.0020	0.0020	0.002000	0	98.4	50	150			J
Molybdenum	0.0086	0.0080	0.008000	0	108	50	150			
Nickel	0.0071	0.010	0.005000	0	143	50	150			J
Potassium	0.44	1.0	0.5000	0	89.0	50	150			J
Silver	0.0050	0.0050	0.005000	0	101	50	150			
Sodium	0.54	1.0	0.5000	0	108	50	150			J
Zinc	0.0050	0.010	0.005000	0	101	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033112** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	95.5	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.3	85	115			
Boron	0.49	0.040	0.5000	0	98.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Calcium	49	1.0	50.00	0	97.4	85	115			
Chromium	0.48	0.0060	0.5000	0	95.9	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.0	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.48	0.020	0.5000	0	96.1	85	115			
Magnesium	49	1.0	50.00	0	98.4	85	115			
Manganese	0.49	0.0020	0.5000	0	97.8	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.47	0.010	0.5000	0	94.9	85	115			
Potassium	48	1.0	50.00	0	96.4	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	48	1.0	50.00	0	96.4	85	115			
Zinc	0.48	0.010	0.5000	0	95.2	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0091	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	0.00061	0.0020								J
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	102	50	150			J
Barium	0.0019	0.0020	0.002000	0	97.3	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.038	0.040	0.04000	0	95.7	50	150			J
Cadmium	0.0027	0.0020	0.002000	0	133	50	150			
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0067	0.0060	0.006000	0	112	50	150			
Cobalt	0.0036	0.0060	0.006000	0	59.5	50	150			J
Copper	0.0052	0.0060	0.006000	0	87.1	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.50	1.0	0.5000	0	99.2	50	150			J
Manganese	0.0019	0.0020	0.002000	0	97.0	50	150			J
Molybdenum	0.0044	0.0080	0.008000	0	54.7	50	150			J
Nickel	0.0028	0.010	0.005000	0	57.0	50	150			J
Potassium	0.46	1.0	0.5000	0	91.6	50	150			J
Silver	0.0040	0.0050	0.005000	0	79.8	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Zinc	0.0065	0.010	0.005000	0	131	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.49	0.020	0.5000	0	97.6	85	115			
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.48	0.0020	0.5000	0	96.7	85	115			
Boron	0.48	0.040	0.5000	0	95.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A60216** RunNo: **60216**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2035035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.49	0.0060	0.5000	0	98.8	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Magnesium	49	1.0	50.00	0	98.9	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.0	85	115			
Nickel	0.48	0.010	0.5000	0	95.9	85	115			
Potassium	49	1.0	50.00	0	97.8	85	115			
Silver	0.096	0.0050	0.1000	0	96.3	85	115			
Sodium	49	1.0	50.00	0	97.4	85	115			
Zinc	0.48	0.010	0.5000	0	96.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-45106** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028856** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45106** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028858** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	110	50	150			
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00051	0.00050	0.0005000	0	103	50	150			
Selenium	0.00073	0.0010	0.001000	0	72.9	50	150			J
Thallium	0.00043	0.00050	0.0005000	0	85.9	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J

Sample ID: **MSLCS-45106** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	104	85	115			
Arsenic	0.026	0.0010	0.02500	0	103	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.013	0.00050	0.01250	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **1905520-003GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-19** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0.0005068	96.9	70	130			
Arsenic	0.039	0.0010	0.02500	0.01204	107	70	130			
Selenium	0.025	0.0010	0.02500	0.0009114	97.9	70	130			
Thallium	0.012	0.00050	0.01250	0.0001425	94.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **1905520-003GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-19** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.014	0.00050	0.01250	0.001048	104	70	130			

Sample ID: **1905520-003GMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-19** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028864** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0.0005068	99.3	70	130	2.47	20	
Arsenic	0.038	0.0010	0.02500	0.01204	105	70	130	0.932	20	
Selenium	0.023	0.0010	0.02500	0.0009114	90.2	70	130	7.85	20	
Thallium	0.012	0.00050	0.01250	0.0001425	95.3	70	130	0.400	20	
Uranium	0.014	0.00050	0.01250	0.001048	102	70	130	1.81	20	

Sample ID: **1905520-004GMSLL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-34** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028868** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0.0006303	109	70	130			
Arsenic	0.029	0.0010	0.02500	0.0006498	114	70	130			
Lead	0.013	0.00050	0.01250	0.0008924	93.1	70	130			
Selenium	0.029	0.0010	0.02500	0.001438	111	70	130			
Thallium	0.012	0.00050	0.01250	0.0001060	93.6	70	130			

Sample ID: **1905520-003GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-19** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028907** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0025	0.01250	0.01292	112	70	130			

Sample ID: **1905520-003GMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-19** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028908** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0025	0.01250	0.01292	109	70	130	1.47	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **1905520-004GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-34** Batch ID: **45106** RunNo: **60081**
Prep Date: **5/21/2019** Analysis Date: **5/22/2019** SeqNo: **2028912** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.028	0.0025	0.01250	0.01488	101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.0	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	99.9	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.1	50	150			J
Selenium	0.0011	0.0010	0.001000	0	107	50	150			
Thallium	0.00046	0.00050	0.0005000	0	93.0	50	150			J
Uranium	0.00053	0.00050	0.0005000	0	105	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.2	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.4	85	115			
Lead	0.011	0.00050	0.01250	0	90.5	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			
Thallium	0.012	0.00050	0.01250	0	94.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.6	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D59847** RunNo: **59847**
Prep Date: Analysis Date: **5/13/2019** SeqNo: **2018768** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D59847**	RunNo: **59847**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018768** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.000049	0.00050								J
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D59847**	RunNo: **59847**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018769** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00095	0.0010	0.001000	0	95.2	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	98.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.9	50	150			J
Selenium	0.0013	0.0010	0.001000	0	126	50	150			
Thallium	0.00045	0.00050	0.0005000	0	89.7	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D59847**	RunNo: **59847**
Prep Date:	Analysis Date: **5/13/2019**	SeqNo: **2018770** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.5	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.6	85	115			
Lead	0.011	0.00050	0.01250	0	91.8	85	115			
Selenium	0.023	0.0010	0.02500	0	93.7	85	115			
Thallium	0.012	0.00050	0.01250	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-45093**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **45093**	RunNo: **60076**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2028667** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000046	0.00020								J

Sample ID: **LCS-45093**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **45093**	RunNo: **60076**
Prep Date: **5/21/2019**	Analysis Date: **5/22/2019**	SeqNo: **2028668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59794** RunNo: **59794**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017669** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59794** RunNo: **59794**
Prep Date: Analysis Date: **5/10/2019** SeqNo: **2017670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	111	90	110			S
Chloride	4.9	0.50	5.000	0	97.1	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.3	90	110			
Bromide	2.4	0.10	2.500	0	97.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.2	90	110			
Sulfate	9.9	0.50	10.00	0	98.8	90	110			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59960** RunNo: **59960**
Prep Date: Analysis Date: **5/16/2019** SeqNo: **2023763** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59960** RunNo: **59960**
Prep Date: Analysis Date: **5/16/2019** SeqNo: **2023764** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	107	90	110			
Chloride	4.8	0.50	5.000	0	96.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **MB-44954**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **44954**	RunNo: **59921**
Prep Date: **5/16/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022129** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-44954**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **44954**	RunNo: **59921**
Prep Date: **5/16/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022237** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.084	0.010	0.1000	0	83.9	70	130			

Sample ID: **LCSD-44954**	SampType: **LCSD**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSS02**	Batch ID: **44954**	RunNo: **59921**
Prep Date: **5/16/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022238** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.088	0.010	0.1000	0	87.6	70	130	4.31	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **1905520-003BMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **MKTF-19** Batch ID: **44901** RunNo: **59891**

Prep Date: **5/14/2019** Analysis Date: **5/15/2019** SeqNo: **2020718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	18	1.0	5.000	11.44	124	68.1	137			
Surr: DNOP	0.55		0.5000		110	70	130			

Sample ID: **1905520-003BMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **MKTF-19** Batch ID: **44901** RunNo: **59891**

Prep Date: **5/14/2019** Analysis Date: **5/15/2019** SeqNo: **2020719** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	17	1.0	5.000	11.44	112	68.1	137	3.56	20	
Surr: DNOP	0.54		0.5000		109	70	130	0	0	

Sample ID: **LCS-44901** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **LCSW** Batch ID: **44901** RunNo: **59891**

Prep Date: **5/14/2019** Analysis Date: **5/15/2019** SeqNo: **2020723** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	71.8	135			
Surr: DNOP	0.52		0.5000		105	70	130			

Sample ID: **MB-44901** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **PBW** Batch ID: **44901** RunNo: **59891**

Prep Date: **5/14/2019** Analysis Date: **5/15/2019** SeqNo: **2020724** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		119	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021373** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	85.8	70	130			
Toluene	18	1.0	20.00	0	90.8	70	130			
Chlorobenzene	19	1.0	20.00	0	93.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	84.7	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	78.9	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.1	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.4	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	8.8		10.00		88.0	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021394** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021394** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021394** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.1	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.2	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W59927**	RunNo: **59927**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023711** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.1	70	130			
Toluene	19	1.0	20.00	0	96.6	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.2	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.7	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.2	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	8.8		10.00		88.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59927**	RunNo: **59927**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59927**	RunNo: **59927**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W59927**	RunNo: **59927**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		81.4	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		87.6	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.4	70	130			
Surr: Toluene-d8	8.9		10.00		88.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **1905520-004Cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-34** Batch ID: **44966** RunNo: **60135**
Prep Date: **5/16/2019** Analysis Date: **5/23/2019** SeqNo: **2031029** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	69	10	100.0	0	69.0	30	94			
4-Chloro-3-methylphenol	180	10	200.0	0	90.7	30.9	101			
2-Chlorophenol	140	10	200.0	0	67.9	15.8	96.2			
1,4-Dichlorobenzene	45	10	100.0	0	44.5	25.6	87.2			
2,4-Dinitrotoluene	70	10	100.0	0	69.9	29.5	85.8			
N-Nitrosodi-n-propylamine	80	10	100.0	0	80.3	28.6	108			
4-Nitrophenol	17	10	200.0	0	8.59	15	59.7			S
Pentachlorophenol	15	20	200.0	0	7.60	21.1	99.4			JS
Phenol	91	10	200.0	0	45.5	15	61.9			
Pyrene	76	10	100.0	0	75.7	37.5	105			
1,2,4-Trichlorobenzene	52	10	100.0	0	51.6	17.1	98.7			
Surr: 2-Fluorophenol	60		200.0		29.8	15	101			
Surr: Phenol-d5	71		200.0		35.3	15	84.6			
Surr: 2,4,6-Tribromophenol	77		200.0		38.3	27.8	112			
Surr: Nitrobenzene-d5	68		100.0		67.8	33	113			
Surr: 2-Fluorobiphenyl	59		100.0		58.6	26.6	107			
Surr: 4-Terphenyl-d14	76		100.0		76.4	18.7	148			

Sample ID: **1905520-004Cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-34** Batch ID: **44966** RunNo: **60135**
Prep Date: **5/16/2019** Analysis Date: **5/23/2019** SeqNo: **2031030** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.5	30	94	11.5	47.7	
4-Chloro-3-methylphenol	200	10	200.0	0	98.7	30.9	101	8.48	54.7	
2-Chlorophenol	140	10	200.0	0	70.1	15.8	96.2	3.19	40.9	
1,4-Dichlorobenzene	45	10	100.0	0	45.0	25.6	87.2	1.16	46.8	
2,4-Dinitrotoluene	78	10	100.0	0	77.8	29.5	85.8	10.8	49.8	
N-Nitrosodi-n-propylamine	84	10	100.0	0	83.7	28.6	108	4.17	45.2	
4-Nitrophenol	18	10	200.0	0	9.23	15	59.7	7.18	82.1	S
Pentachlorophenol	18	20	200.0	0	8.84	21.1	99.4	15.1	52	JS
Phenol	96	10	200.0	0	48.2	15	61.9	5.89	61.9	
Pyrene	86	10	100.0	0	86.5	37.5	105	13.2	39.9	
1,2,4-Trichlorobenzene	59	10	100.0	0	58.6	17.1	98.7	12.6	47.5	
Surr: 2-Fluorophenol	59		200.0		29.7	15	101	0	0	
Surr: Phenol-d5	72		200.0		35.8	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	73		200.0		36.5	27.8	112	0	0	
Surr: Nitrobenzene-d5	69		100.0		69.0	33	113	0	0	
Surr: 2-Fluorobiphenyl	56		100.0		56.2	26.6	107	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **1905520-004Cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-34**	Batch ID: **44966**	RunNo: **60135**
Prep Date: **5/16/2019**	Analysis Date: **5/23/2019**	SeqNo: **2031030** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	83		100.0		82.5	18.7	148	0	0	

Sample ID: **mb-44966**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44966**	RunNo: **60135**
Prep Date: **5/16/2019**	Analysis Date: **5/23/2019**	SeqNo: **2031051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR MKTF Wells

Sample ID: **mb-44966** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44966** RunNo: **60135**
Prep Date: **5/16/2019** Analysis Date: **5/23/2019** SeqNo: **2031051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **mb-44966**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44966**	RunNo: **60135**
Prep Date: **5/16/2019**	Analysis Date: **5/23/2019**	SeqNo: **2031051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		71.5	15	101			
Surr: Phenol-d5	110		200.0		55.7	15	84.6			
Surr: 2,4,6-Tribromophenol	180		200.0		89.8	27.8	112			
Surr: Nitrobenzene-d5	92		100.0		91.6	33	113			
Surr: 2-Fluorobiphenyl	69		100.0		69.2	26.6	107			
Surr: 4-Terphenyl-d14	92		100.0		91.7	18.7	148			

Sample ID: **lcs-44966**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44966**	RunNo: **60135**
Prep Date: **5/16/2019**	Analysis Date: **5/23/2019**	SeqNo: **2031052** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	69	10	100.0	0	68.8	32.2	94			
4-Chloro-3-methylphenol	180	10	200.0	0	90.7	37.7	101			
2-Chlorophenol	160	10	200.0	0	78.5	32.6	90.1			
1,4-Dichlorobenzene	48	10	100.0	0	48.4	30	87.2			
2,4-Dinitrotoluene	73	10	100.0	0	72.8	35.9	85.8			
N-Nitrosodi-n-propylamine	82	10	100.0	0	82.1	37.1	108			
4-Nitrophenol	94	10	200.0	0	47.2	22.4	86.6			
Pentachlorophenol	130	20	200.0	0	65.6	31.6	91			
Phenol	99	10	200.0	0	49.7	21.7	84.9			
Pyrene	70	10	100.0	0	70.3	46.3	103			
1,2,4-Trichlorobenzene	55	10	100.0	0	55.4	30.2	88.3			
Surr: 2-Fluorophenol	120		200.0		60.6	15	101			
Surr: Phenol-d5	96		200.0		48.1	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		77.4	27.8	112			
Surr: Nitrobenzene-d5	76		100.0		76.1	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	26.6	107			
Surr: 4-Terphenyl-d14	82		100.0		81.7	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905520**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR MKTF Wells

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.8	70	130			
Surr: BFB	9.4		10.00		94.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R59906**	RunNo: **59906**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021416** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.6		10.00		95.5	70	130			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G59927**	RunNo: **59927**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023757** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.8	70	130			
Surr: BFB	9.3		10.00		93.1	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G59927**	RunNo: **59927**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.3		10.00		93.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905520** RcptNo: **1**

Received By: **Isaiah Ortiz** **5/9/2019 4:10:00 PM** I-Ox

Completed By: **Leah Baca** **5/10/2019 7:34:48 AM**

Reviewed By: IO 5/10/19/IO 5/10/19 (Leah Baca combos)

Labeled by JJC 5-10-19/ENM 5/10/19 (combos)

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 7 (22) 14 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	NO Adjusted? yes
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	ENM 5/10/19 Checked by: JJC 5-10-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: ~ 0.4 ml HNO_3 was added to 003F for <2 for Metals analysis. JJC 5-10-19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			
2	4.2	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush

Project Name:
2019 2ND QTR - MKTF WELLS

Project #:

Project Manager:
BRIAN MOORE

Sampler: CAJOHNSON1@MARATHONPETROLEUM.COM

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.6°C 4.2°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905520	8260+MTBE	8015D(DRO/MRO/GRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	MAJOR CATIONS/ANIONS		METHOD 8011 - EDB	CYANIDE							Air Bubbles (Y or N)
5/9/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-001	X															
5/9/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	HCL	-002	X															
5/9/2019	845	AQUEOUS	MKTF-19	MISC	MISC	-003	X	X	X	X	X	X		X								
5/9/2019	938	AQUEOUS	MKTF-34	MISC	MISC	-004	X	X	2	X	X	X		X								
5/9/2019	1016	AQUEOUS	MKTF-33	MISC	MISC	-005	X	X	X	X	X	X		X								
5/9/2019	1016	AQUEOUS	DUPLICATE	MISC	MISC	-006	X	X	X	X	X	X		X								
5/9/2019	1120	AQUEOUS	MKTF-22	MISC	MISC	-007	X	X	X	X	X	X		X								
5/9/2019	1228	AQUEOUS	MKTF-~~28~~ 13	MISC	MISC	-008	X	X	X	X	X	X										
5/9/2019	1300	AQUEOUS	MKTF-17	MISC	MISC	-009	X	X	X	X	X	X		X								
			ENH 5/13/19 per Cheryl			~~-010~~																

Date: 5/9/19 Time: 1400 Relinquished by: Received by: Date: 5/9/19 Time: 1410

Date: 5/9/19 Time: 1610 Relinquished by: Received by: CDO Date: 5/9/19 Time: 1610

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 02, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX:

RE: 2019 2ND QTR MKTF Wells OrderNo.: 1905710

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/14/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued June 07, 2019.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:00:00 AM
Lab ID: 1905710-001 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Toluene	ND	0.35	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Naphthalene	ND	0.28	2.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Acetone	ND	1.2	10		µg/L	1	5/20/2019 7:56:20 PM	R60052
Bromobenzene	ND	0.24	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Bromoform	ND	0.29	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Bromomethane	ND	0.27	3.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
2-Butanone	ND	2.1	10		µg/L	1	5/20/2019 7:56:20 PM	R60052
Carbon disulfide	ND	0.45	10		µg/L	1	5/20/2019 7:56:20 PM	R60052
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Chloroethane	ND	0.18	2.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Chloroform	ND	0.12	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Chloromethane	ND	0.32	3.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Dibromomethane	ND	0.21	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/20/2019 7:56:20 PM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:00:00 AM
Lab ID: 1905710-001 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
2-Hexanone	ND	1.5	10		µg/L	1	5/20/2019 7:56:20 PM	R60052
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/20/2019 7:56:20 PM	R60052
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Styrene	ND	0.19	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/20/2019 7:56:20 PM	R60052
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/20/2019 7:56:20 PM	R60052
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	1	5/20/2019 7:56:20 PM	R60052
Surr: 4-Bromofluorobenzene	90.5	0	70-130		%Rec	1	5/20/2019 7:56:20 PM	R60052
Surr: Dibromofluoromethane	99.8	0	70-130		%Rec	1	5/20/2019 7:56:20 PM	R60052
Surr: Toluene-d8	88.2	0	70-130		%Rec	1	5/20/2019 7:56:20 PM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR MKTF Wells
Collection Date:
Lab ID: 1905710-002
Matrix: TRIP BLANK
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.55	0.17	1.0	J	µg/L	1	5/20/2019 8:25:06 PM	R60052
Toluene	ND	0.35	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Naphthalene	ND	0.28	2.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Acetone	6.1	1.2	10	J	µg/L	1	5/20/2019 8:25:06 PM	R60052
Bromobenzene	ND	0.24	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Bromoform	ND	0.29	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Bromomethane	ND	0.27	3.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
2-Butanone	ND	2.1	10		µg/L	1	5/20/2019 8:25:06 PM	R60052
Carbon disulfide	ND	0.45	10		µg/L	1	5/20/2019 8:25:06 PM	R60052
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Chloroethane	ND	0.18	2.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Chloroform	ND	0.12	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Chloromethane	ND	0.32	3.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Dibromomethane	ND	0.21	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/20/2019 8:25:06 PM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR MKTF Wells
Collection Date:
Lab ID: 1905710-002
Matrix: TRIP BLANK
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
2-Hexanone	ND	1.5	10		µg/L	1	5/20/2019 8:25:06 PM	R60052
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/20/2019 8:25:06 PM	R60052
Methylene Chloride	0.30	0.15	3.0	J	µg/L	1	5/20/2019 8:25:06 PM	R60052
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Styrene	ND	0.19	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/20/2019 8:25:06 PM	R60052
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/20/2019 8:25:06 PM	R60052
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	1	5/20/2019 8:25:06 PM	R60052
Surr: 4-Bromofluorobenzene	91.0	0	70-130		%Rec	1	5/20/2019 8:25:06 PM	R60052
Surr: Dibromofluoromethane	96.0	0	70-130		%Rec	1	5/20/2019 8:25:06 PM	R60052
Surr: Toluene-d8	86.4	0	70-130		%Rec	1	5/20/2019 8:25:06 PM	R60052

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:35:00 AM
Lab ID: 1905710-003 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	3.4	0.35	1.0		mg/L	1	5/17/2019 2:03:10 PM	44962
Motor Oil Range Organics (MRO)	16	5.0	5.0		mg/L	1	5/17/2019 2:03:10 PM	44962
Surr: DNOP	120	0	70-130		%Rec	1	5/17/2019 2:03:10 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.2	0.25	0.50		mg/L	5	5/14/2019 10:00:59 PM	R59859
Chloride	960	6.2	50		mg/L	100	5/22/2019 11:54:21 AM	R60098
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/14/2019 10:00:59 PM	R59859
Bromide	1.6	0.089	0.50		mg/L	5	5/14/2019 10:00:59 PM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/14/2019 10:00:59 PM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/14/2019 10:00:59 PM	R59859
Sulfate	0.68	0.27	2.5	J	mg/L	5	5/14/2019 10:00:59 PM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.026	0.0025	0.020		mg/L	1	5/24/2019 3:11:39 PM	A60186
Barium	2.5	0.0065	0.020	*	mg/L	10	5/24/2019 3:13:41 PM	A60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 3:11:39 PM	A60186
Boron	0.59	0.0045	0.040		mg/L	1	5/24/2019 3:11:39 PM	A60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 3:11:39 PM	A60186
Calcium	110	0.62	10		mg/L	10	5/24/2019 3:13:41 PM	A60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 3:11:39 PM	A60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 3:11:39 PM	A60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 3:11:39 PM	A60186
Iron	5.8	0.087	0.20	*	mg/L	10	5/24/2019 3:13:41 PM	A60186
Magnesium	28	0.050	1.0		mg/L	1	5/24/2019 3:11:39 PM	A60186
Manganese	2.6	0.0029	0.020	*	mg/L	10	5/24/2019 3:13:41 PM	A60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 3:11:39 PM	A60186
Nickel	0.056	0.0040	0.010		mg/L	1	5/24/2019 3:11:39 PM	A60186
Potassium	1.4	0.16	1.0		mg/L	1	5/24/2019 3:11:39 PM	A60186
Silver	0.0015	0.00094	0.0050	J	mg/L	1	5/24/2019 3:11:39 PM	A60186
Sodium	760	4.2	10		mg/L	10	5/24/2019 3:13:41 PM	A60186
Zinc	0.018	0.0023	0.010		mg/L	1	5/24/2019 3:11:39 PM	A60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.69	0.0025	0.020	*	mg/L	1	5/28/2019 5:02:36 PM	45167
Barium	3.5	0.0032	0.010	*	mg/L	5	5/28/2019 5:04:29 PM	45167
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 5:02:36 PM	45167
Boron	0.58	0.0045	0.040		mg/L	1	5/28/2019 5:02:36 PM	45167
Cadmium	ND	0.00074	0.0020		mg/L	1	5/28/2019 5:02:36 PM	45167
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 5:02:36 PM	45167
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 5:02:36 PM	45167

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Hall Environmental Analysis Laboratory, Inc.

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Lab ID: 1905710-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/28/2019 5:02:36 PM	45167
Iron	5.8	0.087	0.20	*	mg/L	10	5/31/2019 12:29:07 PM	45167
Manganese	3.0	0.0014	0.010	*	mg/L	5	5/28/2019 5:04:29 PM	45167
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 5:02:36 PM	45167
Nickel	0.054	0.0040	0.010		mg/L	1	5/28/2019 5:02:36 PM	45167
Silver	ND	0.0014	0.0050		mg/L	1	5/28/2019 5:02:36 PM	45167
Zinc	0.0079	0.0058	0.010	J	mg/L	1	5/28/2019 5:02:36 PM	45167
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.0069	0.0019	0.0050	*	mg/L	5	5/15/2019 4:49:59 PM	C59904
Arsenic	0.0093	0.00050	0.0050		mg/L	5	5/15/2019 4:49:59 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 4:49:59 PM	C59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 4:49:59 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:49:59 PM	C59904
Uranium	ND	0.00037	0.0025		mg/L	5	5/15/2019 4:49:59 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/24/2019 2:40:17 PM	45167
Arsenic	0.012	0.00031	0.0010	*	mg/L	1	5/28/2019 2:25:39 PM	45167
Lead	0.0016	0.000055	0.00050		mg/L	1	5/24/2019 2:40:17 PM	45167
Selenium	0.00076	0.00048	0.0010	J	mg/L	1	5/28/2019 2:25:39 PM	45167
Thallium	0.000062	0.000052	0.00050	J	mg/L	1	5/24/2019 2:40:17 PM	45167
Uranium	0.0028	0.000085	0.00050		mg/L	1	5/24/2019 2:40:17 PM	45167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:39:07 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Benzoic acid	ND	11	20		µg/L	1	5/23/2019 5:38:48 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/23/2019 5:38:48 PM	44966

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Collection Date: 5/14/2019 7:35:00 AM
Lab ID: 1905710-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/23/2019 5:38:48 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/23/2019 5:38:48 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/23/2019 5:38:48 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/23/2019 5:38:48 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/23/2019 5:38:48 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/23/2019 5:38:48 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/23/2019 5:38:48 PM	44966
2,4-Dimethylphenol	13	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/23/2019 5:38:48 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/23/2019 5:38:48 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
1-Methylnaphthalene	19	3.1	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2-Methylnaphthalene	15	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2-Methylphenol	6.4	2.9	10	J	µg/L	1	5/23/2019 5:38:48 PM	44966

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Hall Environmental Analysis Laboratory, Inc.

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Collection Date: 5/14/2019 7:35:00 AM
Lab ID: 1905710-003
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	4.3	3.6	10	J	µg/L	1	5/23/2019 5:38:48 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/23/2019 5:38:48 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Naphthalene	58	4.1	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 5:38:48 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/23/2019 5:38:48 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/23/2019 5:38:48 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Phenol	130	8.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/23/2019 5:38:48 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/23/2019 5:38:48 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/23/2019 5:38:48 PM	44966
Surr: 2-Fluorophenol	42.5	0	15-101		%Rec	1	5/23/2019 5:38:48 PM	44966
Surr: Phenol-d5	36.6	0	15-84.6		%Rec	1	5/23/2019 5:38:48 PM	44966
Surr: 2,4,6-Tribromophenol	63.5	0	27.8-112		%Rec	1	5/23/2019 5:38:48 PM	44966
Surr: Nitrobenzene-d5	72.7	0	33-113		%Rec	1	5/23/2019 5:38:48 PM	44966
Surr: 2-Fluorobiphenyl	54.3	0	26.6-107		%Rec	1	5/23/2019 5:38:48 PM	44966
Surr: 4-Terphenyl-d14	65.2	0	18.7-148		%Rec	1	5/23/2019 5:38:48 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	14000	170	1000		µg/L	1000	5/20/2019 8:53:50 PM	R60052
Toluene	110	35	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Ethylbenzene	710	13	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Methyl tert-butyl ether (MTBE)	620	46	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2,4-Trimethylbenzene	240	21	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,3,5-Trimethylbenzene	40	19	100	J	µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2-Dibromoethane (EDB)	ND	17	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Naphthalene	81	28	200	J	µg/L	100	5/20/2019 9:22:31 PM	R60052
1-Methylnaphthalene	ND	31	400		µg/L	100	5/20/2019 9:22:31 PM	R60052
2-Methylnaphthalene	ND	35	400		µg/L	100	5/20/2019 9:22:31 PM	R60052
Acetone	ND	120	1000		µg/L	100	5/20/2019 9:22:31 PM	R60052
Bromobenzene	ND	24	100		µg/L	100	5/20/2019 9:22:31 PM	R60052

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	13	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Bromoform	ND	29	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Bromomethane	ND	27	300		µg/L	100	5/20/2019 9:22:31 PM	R60052
2-Butanone	ND	210	1000		µg/L	100	5/20/2019 9:22:31 PM	R60052
Carbon disulfide	ND	45	1000		µg/L	100	5/20/2019 9:22:31 PM	R60052
Carbon Tetrachloride	ND	14	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Chlorobenzene	ND	19	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Chloroethane	ND	18	200		µg/L	100	5/20/2019 9:22:31 PM	R60052
Chloroform	ND	12	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Chloromethane	ND	32	300		µg/L	100	5/20/2019 9:22:31 PM	R60052
2-Chlorotoluene	ND	25	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
4-Chlorotoluene	ND	23	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
cis-1,2-DCE	ND	19	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
cis-1,3-Dichloropropene	ND	14	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2-Dibromo-3-chloropropane	ND	33	200		µg/L	100	5/20/2019 9:22:31 PM	R60052
Dibromochloromethane	ND	24	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Dibromomethane	ND	21	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2-Dichlorobenzene	ND	30	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,3-Dichlorobenzene	ND	25	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,4-Dichlorobenzene	ND	29	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Dichlorodifluoromethane	ND	26	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,1-Dichloroethane	ND	14	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,1-Dichloroethene	ND	21	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2-Dichloropropane	ND	21	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,3-Dichloropropane	ND	20	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
2,2-Dichloropropane	ND	23	200		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,1-Dichloropropene	ND	16	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Hexachlorobutadiene	ND	31	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
2-Hexanone	ND	150	1000		µg/L	100	5/20/2019 9:22:31 PM	R60052
Isopropylbenzene	ND	19	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
4-Isopropyltoluene	ND	22	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	5/20/2019 9:22:31 PM	R60052
Methylene Chloride	18	15	300	J	µg/L	100	5/20/2019 9:22:31 PM	R60052
n-Butylbenzene	ND	23	300		µg/L	100	5/20/2019 9:22:31 PM	R60052
n-Propylbenzene	29	21	100	J	µg/L	100	5/20/2019 9:22:31 PM	R60052
sec-Butylbenzene	ND	25	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Styrene	ND	19	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
tert-Butylbenzene	ND	21	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,1,1,2-Tetrachloroethane	ND	21	100		µg/L	100	5/20/2019 9:22:31 PM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-16
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:35:00 AM
Lab ID: 1905710-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	55	200		µg/L	100	5/20/2019 9:22:31 PM	R60052
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
trans-1,2-DCE	ND	18	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
trans-1,3-Dichloropropene	ND	17	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2,3-Trichlorobenzene	ND	30	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2,4-Trichlorobenzene	ND	20	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,1,1-Trichloroethane	ND	17	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,1,2-Trichloroethane	ND	22	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Trichloroethene (TCE)	ND	17	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Trichlorofluoromethane	ND	19	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
1,2,3-Trichloropropane	ND	30	200		µg/L	100	5/20/2019 9:22:31 PM	R60052
Vinyl chloride	ND	18	100		µg/L	100	5/20/2019 9:22:31 PM	R60052
Xylenes, Total	620	45	150		µg/L	100	5/20/2019 9:22:31 PM	R60052
Surr: 1,2-Dichloroethane-d4	88.2	0	70-130		%Rec	100	5/20/2019 9:22:31 PM	R60052
Surr: 4-Bromofluorobenzene	91.1	0	70-130		%Rec	100	5/20/2019 9:22:31 PM	R60052
Surr: Dibromofluoromethane	100	0	70-130		%Rec	100	5/20/2019 9:22:31 PM	R60052
Surr: Toluene-d8	85.6	0	70-130		%Rec	100	5/20/2019 9:22:31 PM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	30	3.1	5.0		mg/L	100	5/20/2019 9:22:31 PM	G60052
Surr: BFB	96.4	0	70-130		%Rec	100	5/20/2019 9:22:31 PM	G60052

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:47:00 AM
Lab ID: 1905710-004
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	5.4	0.35	1.0		mg/L	1	5/17/2019 2:27:31 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 2:27:31 PM	44962
Surr: DNOP	124	0	70-130		%Rec	1	5/17/2019 2:27:31 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.2	0.25	0.50		mg/L	5	5/14/2019 10:25:49 PM	R59859
Chloride	3400	31	250		mg/L	500	5/22/2019 12:06:45 PM	R60098
Nitrogen, Nitrite (As N)	ND	0.090	2.0		mg/L	20	5/14/2019 10:38:14 PM	R59859
Bromide	3.9	0.089	0.50		mg/L	5	5/14/2019 10:25:49 PM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/14/2019 10:25:49 PM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/14/2019 10:25:49 PM	R59859
Sulfate	36	0.27	2.5		mg/L	5	5/14/2019 10:25:49 PM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 3:16:00 PM	A60186
Barium	5.0	0.0032	0.010	*	mg/L	5	5/24/2019 3:18:13 PM	A60186
Beryllium	0.00061	0.00028	0.0020	J	mg/L	1	5/24/2019 3:16:00 PM	A60186
Boron	0.88	0.0045	0.040		mg/L	1	5/24/2019 3:16:00 PM	A60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 3:16:00 PM	A60186
Calcium	650	3.1	50		mg/L	50	5/24/2019 3:26:56 PM	A60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 3:16:00 PM	A60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 3:16:00 PM	A60186
Copper	0.0035	0.0013	0.0060	J	mg/L	1	5/24/2019 3:16:00 PM	A60186
Iron	22	0.44	1.0	*	mg/L	50	5/24/2019 3:26:56 PM	A60186
Magnesium	200	0.25	5.0		mg/L	5	5/24/2019 3:18:13 PM	A60186
Manganese	9.0	0.014	0.10	*	mg/L	50	5/24/2019 3:26:56 PM	A60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 3:16:00 PM	A60186
Nickel	0.078	0.0040	0.010		mg/L	1	5/24/2019 3:16:00 PM	A60186
Potassium	2.7	0.16	1.0		mg/L	1	5/24/2019 3:16:00 PM	A60186
Silver	0.0079	0.00094	0.0050		mg/L	1	5/24/2019 3:16:00 PM	A60186
Sodium	1500	21	50		mg/L	50	5/24/2019 3:26:56 PM	A60186
Zinc	0.022	0.0023	0.010		mg/L	1	5/24/2019 3:16:00 PM	A60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.068	0.0025	0.020		mg/L	1	5/28/2019 5:12:49 PM	45167
Barium	4.4	0.0032	0.010	*	mg/L	5	5/28/2019 5:14:48 PM	45167
Beryllium	0.00048	0.00028	0.0020	J	mg/L	1	5/28/2019 5:12:49 PM	45167
Boron	0.87	0.0045	0.040		mg/L	1	5/28/2019 5:12:49 PM	45167
Cadmium	ND	0.00074	0.0020		mg/L	1	5/28/2019 5:12:49 PM	45167
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 5:12:49 PM	45167
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 5:12:49 PM	45167

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:47:00 AM
Lab ID: 1905710-004
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	0.014	0.0041	0.0060		mg/L	1	5/28/2019 5:12:49 PM	45167
Iron	25	0.44	1.0	*	mg/L	50	5/31/2019 12:37:47 PM	45167
Manganese	8.5	0.0058	0.040	*	mg/L	20	5/30/2019 2:02:17 PM	45167
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 5:12:49 PM	45167
Nickel	0.078	0.0040	0.010		mg/L	1	5/28/2019 5:12:49 PM	45167
Silver	0.0044	0.0014	0.0050	J	mg/L	1	5/28/2019 5:12:49 PM	45167
Zinc	0.018	0.0058	0.010		mg/L	1	5/28/2019 5:12:49 PM	45167
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:52:42 PM	C59904
Arsenic	0.027	0.00050	0.0050	*	mg/L	5	5/15/2019 4:52:42 PM	C59904
Lead	0.0020	0.00027	0.0025	J	mg/L	5	5/15/2019 4:52:42 PM	C59904
Selenium	0.0015	0.00086	0.0050	J	mg/L	5	5/15/2019 4:52:42 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:52:42 PM	C59904
Uranium	0.0027	0.00037	0.0025		mg/L	5	5/15/2019 4:52:42 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	0.00056	0.00039	0.0010	J	mg/L	1	5/24/2019 2:42:16 PM	45167
Arsenic	0.034	0.00031	0.0010	*	mg/L	1	5/28/2019 2:27:51 PM	45167
Lead	0.0050	0.000055	0.00050		mg/L	1	5/24/2019 2:42:16 PM	45167
Selenium	0.00079	0.00048	0.0010	J	mg/L	1	5/28/2019 2:27:51 PM	45167
Thallium	ND	0.000052	0.00050		mg/L	1	5/24/2019 2:42:16 PM	45167
Uranium	0.0037	0.000085	0.00050		mg/L	1	5/24/2019 2:42:16 PM	45167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:41:17 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Acenaphthylene	ND	12	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Aniline	ND	18	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Anthracene	ND	13	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Azobenzene	ND	16	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Benz(a)anthracene	ND	18	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Benzo(a)pyrene	ND	18	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Benzoic acid	ND	54	100		µg/L	1	5/23/2019 6:08:43 PM	44966
Benzyl alcohol	ND	12	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/23/2019 6:08:43 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:47:00 AM
Lab ID: 1905710-004
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Bis(2-ethylhexyl)phthalate	ND	22	50		µg/L	1	5/23/2019 6:08:43 PM	44966
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Carbazole	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/23/2019 6:08:43 PM	44966
4-Chloroaniline	ND	11	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2-Chloronaphthalene	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2-Chlorophenol	ND	13	50		µg/L	1	5/23/2019 6:08:43 PM	44966
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Chrysene	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Dibenzofuran	ND	16	50		µg/L	1	5/23/2019 6:08:43 PM	44966
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/23/2019 6:08:43 PM	44966
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/23/2019 6:08:43 PM	44966
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/23/2019 6:08:43 PM	44966
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Diethyl phthalate	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Dimethyl phthalate	ND	16	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/23/2019 6:08:43 PM	44966
2,4-Dimethylphenol	39	15	50	J	µg/L	1	5/23/2019 6:08:43 PM	44966
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/23/2019 6:08:43 PM	44966
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/23/2019 6:08:43 PM	44966
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Fluoranthene	ND	12	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Fluorene	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Hexachlorobenzene	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Hexachlorobutadiene	ND	24	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Hexachloroethane	ND	24	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Isophorone	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
1-Methylnaphthalene	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2-Methylnaphthalene	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2-Methylphenol	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:47:00 AM
Lab ID: 1905710-004
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	18	50		µg/L	1	5/23/2019 6:08:43 PM	44966
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/23/2019 6:08:43 PM	44966
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/23/2019 6:08:43 PM	44966
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Naphthalene	65	21	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2-Nitroaniline	ND	16	50		µg/L	1	5/23/2019 6:08:43 PM	44966
3-Nitroaniline	ND	16	50		µg/L	1	5/23/2019 6:08:43 PM	44966
4-Nitroaniline	ND	13	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Nitrobenzene	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2-Nitrophenol	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
4-Nitrophenol	ND	38	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Pentachlorophenol	ND	14	100		µg/L	1	5/23/2019 6:08:43 PM	44966
Phenanthrene	ND	14	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Phenol	ND	40	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Pyrene	ND	13	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Pyridine	ND	48	50		µg/L	1	5/23/2019 6:08:43 PM	44966
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/23/2019 6:08:43 PM	44966
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/23/2019 6:08:43 PM	44966
Surr: 2-Fluorophenol	34.7	0	15-101		%Rec	1	5/23/2019 6:08:43 PM	44966
Surr: Phenol-d5	35.7	0	15-84.6		%Rec	1	5/23/2019 6:08:43 PM	44966
Surr: 2,4,6-Tribromophenol	48.4	0	27.8-112		%Rec	1	5/23/2019 6:08:43 PM	44966
Surr: Nitrobenzene-d5	67.6	0	33-113		%Rec	1	5/23/2019 6:08:43 PM	44966
Surr: 2-Fluorobiphenyl	51.3	0	26.6-107		%Rec	1	5/23/2019 6:08:43 PM	44966
Surr: 4-Terphenyl-d14	82.2	0	18.7-148		%Rec	1	5/23/2019 6:08:43 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2300	17	100		µg/L	100	5/20/2019 9:51:12 PM	R60052
Toluene	ND	3.5	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Ethylbenzene	1000	13	100		µg/L	100	5/20/2019 9:51:12 PM	R60052
Methyl tert-butyl ether (MTBE)	32	4.6	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2,4-Trimethylbenzene	840	2.1	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,3,5-Trimethylbenzene	230	1.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2-Dibromoethane (EDB)	ND	1.7	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Naphthalene	260	2.8	20		µg/L	10	5/20/2019 10:19:58 PM	R60052
1-Methylnaphthalene	53	3.1	40		µg/L	10	5/20/2019 10:19:58 PM	R60052
2-Methylnaphthalene	52	3.5	40		µg/L	10	5/20/2019 10:19:58 PM	R60052
Acetone	ND	12	100		µg/L	10	5/20/2019 10:19:58 PM	R60052
Bromobenzene	ND	2.4	10		µg/L	10	5/20/2019 10:19:58 PM	R60052

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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:47:00 AM
Lab ID: 1905710-004
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	1.3	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Bromoform	ND	2.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Bromomethane	ND	2.7	30		µg/L	10	5/20/2019 10:19:58 PM	R60052
2-Butanone	ND	21	100		µg/L	10	5/20/2019 10:19:58 PM	R60052
Carbon disulfide	ND	4.5	100		µg/L	10	5/20/2019 10:19:58 PM	R60052
Carbon Tetrachloride	ND	1.4	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Chlorobenzene	ND	1.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Chloroethane	ND	1.8	20		µg/L	10	5/20/2019 10:19:58 PM	R60052
Chloroform	ND	1.2	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Chloromethane	ND	3.2	30		µg/L	10	5/20/2019 10:19:58 PM	R60052
2-Chlorotoluene	ND	2.5	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
4-Chlorotoluene	ND	2.3	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
cis-1,2-DCE	ND	1.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
cis-1,3-Dichloropropene	ND	1.4	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2-Dibromo-3-chloropropane	ND	3.3	20		µg/L	10	5/20/2019 10:19:58 PM	R60052
Dibromochloromethane	ND	2.4	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Dibromomethane	ND	2.1	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2-Dichlorobenzene	ND	3.0	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,3-Dichlorobenzene	ND	2.5	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,1-Dichloroethane	ND	1.4	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,1-Dichloroethene	ND	2.1	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2-Dichloropropane	ND	2.1	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,3-Dichloropropane	ND	2.0	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
2,2-Dichloropropane	ND	2.3	20		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,1-Dichloropropene	ND	1.6	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Hexachlorobutadiene	ND	3.1	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
2-Hexanone	ND	15	100		µg/L	10	5/20/2019 10:19:58 PM	R60052
Isopropylbenzene	3.2	1.9	10	J	µg/L	10	5/20/2019 10:19:58 PM	R60052
4-Isopropyltoluene	ND	2.2	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/20/2019 10:19:58 PM	R60052
Methylene Chloride	ND	1.5	30		µg/L	10	5/20/2019 10:19:58 PM	R60052
n-Butylbenzene	ND	2.3	30		µg/L	10	5/20/2019 10:19:58 PM	R60052
n-Propylbenzene	3.9	2.1	10	J	µg/L	10	5/20/2019 10:19:58 PM	R60052
sec-Butylbenzene	ND	2.5	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Styrene	ND	1.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
tert-Butylbenzene	ND	2.1	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,1,1,2-Tetrachloroethane	ND	2.1	10		µg/L	10	5/20/2019 10:19:58 PM	R60052

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 7:47:00 AM
Lab ID: 1905710-004
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	5.5	20		µg/L	10	5/20/2019 10:19:58 PM	R60052
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
trans-1,3-Dichloropropene	ND	1.7	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2,3-Trichlorobenzene	ND	3.0	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2,4-Trichlorobenzene	ND	2.0	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,1,1-Trichloroethane	ND	1.7	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,1,2-Trichloroethane	ND	2.2	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Trichloroethene (TCE)	ND	1.7	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Trichlorofluoromethane	ND	1.9	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
1,2,3-Trichloropropane	ND	3.0	20		µg/L	10	5/20/2019 10:19:58 PM	R60052
Vinyl chloride	ND	1.8	10		µg/L	10	5/20/2019 10:19:58 PM	R60052
Xylenes, Total	3500	45	150		µg/L	100	5/20/2019 9:51:12 PM	R60052
Surr: 1,2-Dichloroethane-d4	94.7	0	70-130		%Rec	10	5/20/2019 10:19:58 PM	R60052
Surr: 4-Bromofluorobenzene	91.3	0	70-130		%Rec	10	5/20/2019 10:19:58 PM	R60052
Surr: Dibromofluoromethane	103	0	70-130		%Rec	10	5/20/2019 10:19:58 PM	R60052
Surr: Toluene-d8	86.0	0	70-130		%Rec	10	5/20/2019 10:19:58 PM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	25	0.31	0.50		mg/L	10	5/20/2019 10:19:58 PM	G60052
Surr: BFB	100	0	70-130		%Rec	10	5/20/2019 10:19:58 PM	G60052

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 8:14:00 AM
Lab ID: 1905710-005
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	9.4	0.35	1.0		mg/L	1	5/17/2019 2:51:55 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 2:51:55 PM	44962
Surr: DNOP	125	0	70-130		%Rec	1	5/17/2019 2:51:55 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/14/2019 10:50:38 PM	R59859
Chloride	540	3.1	25		mg/L	50	5/22/2019 12:43:59 PM	R60098
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/14/2019 10:50:38 PM	R59859
Bromide	1.3	0.089	0.50		mg/L	5	5/14/2019 10:50:38 PM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/14/2019 10:50:38 PM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/14/2019 10:50:38 PM	R59859
Sulfate	6.9	0.27	2.5		mg/L	5	5/14/2019 10:50:38 PM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.038	0.0025	0.020		mg/L	1	5/24/2019 3:29:15 PM	A60186
Barium	5.0	0.0032	0.010	*	mg/L	5	5/24/2019 3:31:17 PM	A60186
Beryllium	0.00029	0.00028	0.0020	J	mg/L	1	5/24/2019 3:29:15 PM	A60186
Boron	0.12	0.0045	0.040		mg/L	1	5/24/2019 3:29:15 PM	A60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 3:29:15 PM	A60186
Calcium	260	0.31	5.0		mg/L	5	5/24/2019 3:31:17 PM	A60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 3:29:15 PM	A60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 3:29:15 PM	A60186
Copper	0.0032	0.0013	0.0060	J	mg/L	1	5/24/2019 3:29:15 PM	A60186
Iron	33	0.44	1.0	*	mg/L	50	5/24/2019 3:33:24 PM	A60186
Magnesium	41	0.050	1.0		mg/L	1	5/24/2019 3:29:15 PM	A60186
Manganese	5.6	0.014	0.10	*	mg/L	50	5/24/2019 3:33:24 PM	A60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 3:29:15 PM	A60186
Nickel	0.0094	0.0040	0.010	J	mg/L	1	5/24/2019 3:29:15 PM	A60186
Potassium	15	0.16	1.0		mg/L	1	5/24/2019 3:29:15 PM	A60186
Silver	0.0017	0.00094	0.0050	J	mg/L	1	5/24/2019 3:29:15 PM	A60186
Sodium	240	2.1	5.0		mg/L	5	5/24/2019 3:31:17 PM	A60186
Zinc	0.065	0.0023	0.010		mg/L	1	5/24/2019 3:29:15 PM	A60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.26	0.0025	0.020	*	mg/L	1	5/28/2019 5:16:52 PM	45167
Barium	5.2	0.0065	0.020	*	mg/L	10	5/30/2019 2:04:22 PM	45167
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 5:16:52 PM	45167
Boron	0.12	0.0045	0.040		mg/L	1	5/28/2019 5:16:52 PM	45167
Cadmium	ND	0.00074	0.0020		mg/L	1	5/28/2019 5:16:52 PM	45167
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 5:16:52 PM	45167
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 5:16:52 PM	45167

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 8:14:00 AM
Lab ID: 1905710-005 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	0.020	0.0041	0.0060		mg/L	1	5/28/2019 5:16:52 PM	45167
Iron	42	0.44	1.0	*	mg/L	50	5/31/2019 4:06:52 PM	45167
Manganese	5.7	0.0029	0.020	*	mg/L	10	5/30/2019 2:04:22 PM	45167
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 5:16:52 PM	45167
Nickel	0.0086	0.0040	0.010	J	mg/L	1	5/28/2019 5:16:52 PM	45167
Silver	ND	0.0014	0.0050		mg/L	1	5/28/2019 5:16:52 PM	45167
Zinc	0.14	0.0058	0.010		mg/L	1	5/28/2019 5:16:52 PM	45167
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:55:24 PM	C59904
Arsenic	0.016	0.00050	0.0050	*	mg/L	5	5/15/2019 4:55:24 PM	C59904
Lead	0.0011	0.00027	0.0025	J	mg/L	5	5/15/2019 4:55:24 PM	C59904
Selenium	0.0011	0.00086	0.0050	J	mg/L	5	5/15/2019 4:55:24 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:55:24 PM	C59904
Uranium	0.0021	0.00037	0.0025	J	mg/L	5	5/15/2019 4:55:24 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/24/2019 2:44:14 PM	45167
Arsenic	0.022	0.00031	0.0010	*	mg/L	1	5/28/2019 2:30:03 PM	45167
Lead	0.0032	0.000055	0.00050		mg/L	1	5/24/2019 2:44:14 PM	45167
Selenium	0.00084	0.00048	0.0010	J	mg/L	1	5/28/2019 2:30:03 PM	45167
Thallium	ND	0.000052	0.00050		mg/L	1	5/24/2019 2:44:14 PM	45167
Uranium	0.0027	0.000085	0.00050		mg/L	1	5/24/2019 2:44:14 PM	45167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000043	0.000038	0.00020	J	mg/L	1	5/16/2019 2:43:28 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Acenaphthylene	ND	12	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Aniline	ND	18	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Anthracene	ND	13	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Azobenzene	ND	16	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Benz(a)anthracene	ND	18	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Benzo(a)pyrene	ND	18	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Benzoic acid	ND	54	100		µg/L	1	5/23/2019 6:38:42 PM	44966
Benzyl alcohol	ND	12	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/23/2019 6:38:42 PM	44966

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 8:14:00 AM
Lab ID: 1905710-005
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Bis(2-ethylhexyl)phthalate	ND	22	50		µg/L	1	5/23/2019 6:38:42 PM	44966
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Carbazole	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/23/2019 6:38:42 PM	44966
4-Chloroaniline	ND	11	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2-Chloronaphthalene	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2-Chlorophenol	ND	13	50		µg/L	1	5/23/2019 6:38:42 PM	44966
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Chrysene	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Dibenzofuran	ND	16	50		µg/L	1	5/23/2019 6:38:42 PM	44966
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/23/2019 6:38:42 PM	44966
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/23/2019 6:38:42 PM	44966
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/23/2019 6:38:42 PM	44966
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Diethyl phthalate	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Dimethyl phthalate	ND	16	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/23/2019 6:38:42 PM	44966
2,4-Dimethylphenol	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/23/2019 6:38:42 PM	44966
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/23/2019 6:38:42 PM	44966
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Fluoranthene	ND	12	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Fluorene	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Hexachlorobenzene	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Hexachlorobutadiene	ND	24	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Hexachloroethane	ND	24	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Isophorone	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
1-Methylnaphthalene	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2-Methylnaphthalene	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2-Methylphenol	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 8:14:00 AM
Lab ID: 1905710-005
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	410	18	50		µg/L	1	5/23/2019 6:38:42 PM	44966
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/23/2019 6:38:42 PM	44966
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/23/2019 6:38:42 PM	44966
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Naphthalene	22	21	50	J	µg/L	1	5/23/2019 6:38:42 PM	44966
2-Nitroaniline	ND	16	50		µg/L	1	5/23/2019 6:38:42 PM	44966
3-Nitroaniline	ND	16	50		µg/L	1	5/23/2019 6:38:42 PM	44966
4-Nitroaniline	ND	13	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Nitrobenzene	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2-Nitrophenol	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
4-Nitrophenol	ND	38	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Pentachlorophenol	ND	14	100		µg/L	1	5/23/2019 6:38:42 PM	44966
Phenanthrene	ND	14	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Phenol	42	40	50	J	µg/L	1	5/23/2019 6:38:42 PM	44966
Pyrene	ND	13	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Pyridine	ND	48	50		µg/L	1	5/23/2019 6:38:42 PM	44966
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/23/2019 6:38:42 PM	44966
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/23/2019 6:38:42 PM	44966
Surr: 2-Fluorophenol	75.0	0	15-101		%Rec	1	5/23/2019 6:38:42 PM	44966
Surr: Phenol-d5	67.8	0	15-84.6		%Rec	1	5/23/2019 6:38:42 PM	44966
Surr: 2,4,6-Tribromophenol	89.8	0	27.8-112		%Rec	1	5/23/2019 6:38:42 PM	44966
Surr: Nitrobenzene-d5	82.9	0	33-113		%Rec	1	5/23/2019 6:38:42 PM	44966
Surr: 2-Fluorobiphenyl	61.0	0	26.6-107		%Rec	1	5/23/2019 6:38:42 PM	44966
Surr: 4-Terphenyl-d14	83.8	0	18.7-148		%Rec	1	5/23/2019 6:38:42 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2400	33	200		µg/L	200	5/20/2019 10:48:36 PM	R60052
Toluene	ND	7.0	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Ethylbenzene	280	2.6	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Methyl tert-butyl ether (MTBE)	290	9.1	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2,4-Trimethylbenzene	150	4.3	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,3,5-Trimethylbenzene	36	3.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Naphthalene	33	5.5	40	J	µg/L	20	5/20/2019 11:17:19 PM	R60052
1-Methylnaphthalene	6.9	6.3	80	J	µg/L	20	5/20/2019 11:17:19 PM	R60052
2-Methylnaphthalene	ND	6.9	80		µg/L	20	5/20/2019 11:17:19 PM	R60052
Acetone	ND	24	200		µg/L	20	5/20/2019 11:17:19 PM	R60052
Bromobenzene	ND	4.9	20		µg/L	20	5/20/2019 11:17:19 PM	R60052

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Qualifiers:

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D	Sample Diluted Due to Matrix
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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 8:14:00 AM
Lab ID: 1905710-005
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	2.7	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Bromoform	ND	5.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Bromomethane	ND	5.5	60		µg/L	20	5/20/2019 11:17:19 PM	R60052
2-Butanone	ND	42	200		µg/L	20	5/20/2019 11:17:19 PM	R60052
Carbon disulfide	ND	9.1	200		µg/L	20	5/20/2019 11:17:19 PM	R60052
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Chlorobenzene	ND	3.9	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Chloroethane	ND	3.6	40		µg/L	20	5/20/2019 11:17:19 PM	R60052
Chloroform	ND	2.4	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Chloromethane	ND	6.4	60		µg/L	20	5/20/2019 11:17:19 PM	R60052
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
cis-1,2-DCE	ND	3.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/20/2019 11:17:19 PM	R60052
Dibromochloromethane	ND	4.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Dibromomethane	ND	4.2	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,1-Dichloroethane	ND	2.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,1-Dichloroethene	ND	4.1	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
2-Hexanone	ND	31	200		µg/L	20	5/20/2019 11:17:19 PM	R60052
Isopropylbenzene	5.9	3.8	20	J	µg/L	20	5/20/2019 11:17:19 PM	R60052
4-Isopropyltoluene	ND	4.3	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/20/2019 11:17:19 PM	R60052
Methylene Chloride	ND	3.1	60		µg/L	20	5/20/2019 11:17:19 PM	R60052
n-Butylbenzene	ND	4.6	60		µg/L	20	5/20/2019 11:17:19 PM	R60052
n-Propylbenzene	12	4.3	20	J	µg/L	20	5/20/2019 11:17:19 PM	R60052
sec-Butylbenzene	ND	5.0	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Styrene	ND	3.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/20/2019 11:17:19 PM	R60052

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-21
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 8:14:00 AM
Lab ID: 1905710-005
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/20/2019 11:17:19 PM	R60052
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/20/2019 11:17:19 PM	R60052
Vinyl chloride	ND	3.6	20		µg/L	20	5/20/2019 11:17:19 PM	R60052
Xylenes, Total	220	9.1	30		µg/L	20	5/20/2019 11:17:19 PM	R60052
Surr: 1,2-Dichloroethane-d4	89.2	0	70-130		%Rec	20	5/20/2019 11:17:19 PM	R60052
Surr: 4-Bromofluorobenzene	93.8	0	70-130		%Rec	20	5/20/2019 11:17:19 PM	R60052
Surr: Dibromofluoromethane	98.9	0	70-130		%Rec	20	5/20/2019 11:17:19 PM	R60052
Surr: Toluene-d8	86.2	0	70-130		%Rec	20	5/20/2019 11:17:19 PM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	8.5	0.61	1.0		mg/L	20	5/20/2019 11:17:19 PM	G60052
Surr: BFB	97.5	0	70-130		%Rec	20	5/20/2019 11:17:19 PM	G60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MTKF-38
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:36:00 AM
Lab ID: 1905710-006
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	5/22/2019 3:41:53 AM	45060
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/17/2019 3:16:22 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 3:16:22 PM	44962
Surr: DNOP	116	0	70-130		%Rec	1	5/17/2019 3:16:22 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.92	0.25	0.50		mg/L	5	5/14/2019 11:15:28 PM	R59859
Chloride	240	1.2	10		mg/L	20	5/14/2019 11:27:53 PM	R59859
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/14/2019 11:15:28 PM	R59859
Bromide	0.48	0.089	0.50	J	mg/L	5	5/14/2019 11:15:28 PM	R59859
Nitrogen, Nitrate (As N)	3.7	0.027	0.50		mg/L	5	5/14/2019 11:15:28 PM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/14/2019 11:15:28 PM	R59859
Sulfate	600	1.1	10		mg/L	20	5/14/2019 11:27:53 PM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 3:35:33 PM	A60186
Barium	0.029	0.00065	0.0020		mg/L	1	5/24/2019 3:35:33 PM	A60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 3:35:33 PM	A60186
Boron	0.49	0.0045	0.040		mg/L	1	5/24/2019 3:35:33 PM	A60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 3:35:33 PM	A60186
Calcium	180	0.31	5.0		mg/L	5	5/24/2019 3:37:35 PM	A60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 3:35:33 PM	A60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 3:35:33 PM	A60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 3:35:33 PM	A60186
Iron	ND	0.0087	0.020		mg/L	1	5/24/2019 3:35:33 PM	A60186
Magnesium	32	0.050	1.0		mg/L	1	5/24/2019 3:35:33 PM	A60186
Manganese	2.2	0.0014	0.010	*	mg/L	5	5/24/2019 3:37:35 PM	A60186
Molybdenum	0.0074	0.0067	0.0080	J	mg/L	1	5/24/2019 3:35:33 PM	A60186
Nickel	0.0062	0.0040	0.010	J	mg/L	1	5/24/2019 3:35:33 PM	A60186
Potassium	0.45	0.16	1.0	J	mg/L	1	5/24/2019 3:35:33 PM	A60186
Silver	0.0030	0.00094	0.0050	J	mg/L	1	5/24/2019 3:35:33 PM	A60186
Sodium	320	2.1	5.0		mg/L	5	5/24/2019 3:37:35 PM	A60186
Zinc	0.018	0.0023	0.010		mg/L	1	5/24/2019 3:35:33 PM	A60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	4.8	0.012	0.10	*	mg/L	5	5/28/2019 5:22:42 PM	45167
Barium	0.11	0.00065	0.0020		mg/L	1	5/28/2019 5:20:49 PM	45167
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 5:20:49 PM	45167
Boron	0.46	0.0045	0.040		mg/L	1	5/28/2019 5:20:49 PM	45167

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MTKF-38
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:36:00 AM
Lab ID: 1905710-006
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/28/2019 5:20:49 PM	45167
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 5:20:49 PM	45167
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 5:20:49 PM	45167
Copper	ND	0.0041	0.0060		mg/L	1	5/28/2019 5:20:49 PM	45167
Iron	1.6	0.017	0.040	*	mg/L	2	5/31/2019 12:40:01 PM	45167
Manganese	2.0	0.0014	0.010	*	mg/L	5	5/28/2019 5:22:42 PM	45167
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 5:20:49 PM	45167
Nickel	ND	0.0040	0.010		mg/L	1	5/28/2019 5:20:49 PM	45167
Silver	ND	0.0014	0.0050		mg/L	1	5/28/2019 5:20:49 PM	45167
Zinc	ND	0.0058	0.010		mg/L	1	5/28/2019 5:20:49 PM	45167
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 4:58:07 PM	C59904
Arsenic	ND	0.00050	0.0050		mg/L	5	5/15/2019 4:58:07 PM	C59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 4:58:07 PM	C59904
Selenium	0.00098	0.00086	0.0050	J	mg/L	5	5/15/2019 4:58:07 PM	C59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 4:58:07 PM	C59904
Uranium	0.021	0.00037	0.0025		mg/L	5	5/15/2019 4:58:07 PM	C59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/24/2019 2:46:13 PM	45167
Arsenic	0.00072	0.00031	0.0010	J	mg/L	1	5/28/2019 2:32:14 PM	45167
Lead	0.0017	0.000055	0.00050		mg/L	1	5/24/2019 2:46:13 PM	45167
Selenium	0.0017	0.00048	0.0010		mg/L	1	5/28/2019 2:32:14 PM	45167
Thallium	ND	0.000052	0.00050		mg/L	1	5/24/2019 2:46:13 PM	45167
Uranium	0.021	0.000085	0.00050		mg/L	1	5/24/2019 2:46:13 PM	45167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000044	0.000038	0.00020	J	mg/L	1	5/16/2019 2:45:39 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 2:26:10 PM	44966

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MTKF-38
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:36:00 AM
Lab ID: 1905710-006
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 2:26:10 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/24/2019 2:26:10 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 2:26:10 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 2:26:10 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 2:26:10 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 2:26:10 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 2:26:10 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 2:26:10 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 2:26:10 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 2:26:10 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MTKF-38
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:36:00 AM
Lab ID: 1905710-006
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 2:26:10 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 2:26:10 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 2:26:10 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Naphthalene	ND	4.1	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 2:26:10 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 2:26:10 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 2:26:10 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 2:26:10 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 2:26:10 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 2:26:10 PM	44966
Surr: 2-Fluorophenol	57.1	0	15-101		%Rec	1	5/24/2019 2:26:10 PM	44966
Surr: Phenol-d5	39.3	0	15-84.6		%Rec	1	5/24/2019 2:26:10 PM	44966
Surr: 2,4,6-Tribromophenol	77.7	0	27.8-112		%Rec	1	5/24/2019 2:26:10 PM	44966
Surr: Nitrobenzene-d5	81.6	0	33-113		%Rec	1	5/24/2019 2:26:10 PM	44966
Surr: 2-Fluorobiphenyl	52.1	0	26.6-107		%Rec	1	5/24/2019 2:26:10 PM	44966
Surr: 4-Terphenyl-d14	90.0	0	18.7-148		%Rec	1	5/24/2019 2:26:10 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Naphthalene	ND	0.28	2.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/22/2019 5:16:25 PM	R60108

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MTKF-38
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:36:00 AM
Lab ID: 1905710-006 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Acetone	6.4	1.2	10	J	µg/L	1	5/22/2019 5:16:25 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 5:16:25 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 5:16:25 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Chloroform	0.79	0.12	1.0	J	µg/L	1	5/22/2019 5:16:25 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 5:16:25 PM	R60108
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 5:16:25 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MTKF-38
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:36:00 AM
Lab ID: 1905710-006 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Tetrachloroethene (PCE)	0.45	0.15	1.0	J	µg/L	1	5/22/2019 5:16:25 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 5:16:25 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 5:16:25 PM	R60108
Surr: 1,2-Dichloroethane-d4	87.6	0	70-130		%Rec	1	5/22/2019 5:16:25 PM	R60108
Surr: 4-Bromofluorobenzene	89.9	0	70-130		%Rec	1	5/22/2019 5:16:25 PM	R60108
Surr: Dibromofluoromethane	96.1	0	70-130		%Rec	1	5/22/2019 5:16:25 PM	R60108
Surr: Toluene-d8	85.8	0	70-130		%Rec	1	5/22/2019 5:16:25 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/22/2019 5:16:25 PM	G60108
Surr: BFB	95.3	0	70-130		%Rec	1	5/22/2019 5:16:25 PM	G60108

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:44:00 AM
Lab ID: 1905710-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/22/2019 3:56:43 AM	45060
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/17/2019 3:40:49 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 3:40:49 PM	44962
Surr: DNOP	115	0	70-130		%Rec	1	5/17/2019 3:40:49 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.93	0.25	0.50		mg/L	5	5/14/2019 11:40:18 PM	R59859
Chloride	230	1.2	10		mg/L	20	5/14/2019 11:52:43 PM	R59859
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/14/2019 11:40:18 PM	R59859
Bromide	0.46	0.089	0.50	J	mg/L	5	5/14/2019 11:40:18 PM	R59859
Nitrogen, Nitrate (As N)	3.5	0.027	0.50		mg/L	5	5/14/2019 11:40:18 PM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/14/2019 11:40:18 PM	R59859
Sulfate	570	1.1	10		mg/L	20	5/14/2019 11:52:43 PM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 4:11:08 PM	A60186
Barium	0.029	0.00065	0.0020		mg/L	1	5/24/2019 4:11:08 PM	A60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 4:11:08 PM	A60186
Boron	0.48	0.0045	0.040		mg/L	1	5/24/2019 4:11:08 PM	A60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 4:11:08 PM	A60186
Calcium	170	0.62	10		mg/L	10	5/24/2019 4:13:07 PM	A60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 4:11:08 PM	A60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 4:11:08 PM	A60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 4:11:08 PM	A60186
Iron	ND	0.0087	0.020		mg/L	1	5/24/2019 4:11:08 PM	A60186
Magnesium	32	0.050	1.0		mg/L	1	5/24/2019 4:11:08 PM	A60186
Manganese	1.7	0.0029	0.020	*	mg/L	10	5/24/2019 4:13:07 PM	A60186
Molybdenum	0.0095	0.0067	0.0080		mg/L	1	5/24/2019 4:11:08 PM	A60186
Nickel	0.0047	0.0040	0.010	J	mg/L	1	5/24/2019 4:11:08 PM	A60186
Potassium	0.50	0.16	1.0	J	mg/L	1	5/24/2019 4:11:08 PM	A60186
Silver	0.0027	0.00094	0.0050	J	mg/L	1	5/24/2019 4:11:08 PM	A60186
Sodium	310	4.2	10		mg/L	10	5/24/2019 4:13:07 PM	A60186
Zinc	0.048	0.0023	0.010		mg/L	1	5/24/2019 4:11:08 PM	A60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.6	0.025	0.20	*	mg/L	10	5/30/2019 2:06:14 PM	45167
Barium	0.17	0.00065	0.0020		mg/L	1	5/28/2019 5:24:49 PM	45167
Beryllium	0.00037	0.00028	0.0020	J	mg/L	1	5/28/2019 5:24:49 PM	45167
Boron	0.49	0.0045	0.040		mg/L	1	5/28/2019 5:24:49 PM	45167

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EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/28/2019 5:24:49 PM	45167
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 5:24:49 PM	45167
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 5:24:49 PM	45167
Copper	ND	0.0041	0.0060		mg/L	1	5/28/2019 5:24:49 PM	45167
Iron	2.6	0.044	0.10	*	mg/L	5	5/28/2019 5:26:42 PM	45167
Manganese	2.0	0.0014	0.010	*	mg/L	5	5/28/2019 5:26:42 PM	45167
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 5:24:49 PM	45167
Nickel	0.0092	0.0040	0.010	J	mg/L	1	5/28/2019 5:24:49 PM	45167
Silver	ND	0.0014	0.0050		mg/L	1	5/28/2019 5:24:49 PM	45167
Zinc	0.0080	0.0058	0.010	J	mg/L	1	5/28/2019 5:24:49 PM	45167
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:08:58 PM	D59904
Arsenic	ND	0.00050	0.0050		mg/L	5	5/15/2019 5:08:58 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:08:58 PM	D59904
Selenium	0.0017	0.00086	0.0050	J	mg/L	5	5/15/2019 5:08:58 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:08:58 PM	D59904
Uranium	0.021	0.00037	0.0025		mg/L	5	5/15/2019 5:08:58 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/24/2019 2:52:11 PM	45167
Arsenic	0.00097	0.00031	0.0010	J	mg/L	1	5/28/2019 2:38:51 PM	45167
Lead	0.0028	0.000055	0.00050		mg/L	1	5/24/2019 2:52:11 PM	45167
Selenium	0.0017	0.00048	0.0010		mg/L	1	5/28/2019 2:38:51 PM	45167
Thallium	0.000062	0.000052	0.00050	J	mg/L	1	5/24/2019 2:52:11 PM	45167
Uranium	0.022	0.000085	0.00050		mg/L	1	5/24/2019 2:52:11 PM	45167
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:47:51 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 2:55:49 PM	44966

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EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 2:55:49 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/24/2019 2:55:49 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 2:55:49 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 2:55:49 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 2:55:49 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 2:55:49 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 2:55:49 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 2:55:49 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 2:55:49 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 2:55:49 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 2:55:49 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 2:55:49 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 2:55:49 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Naphthalene	ND	4.1	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 2:55:49 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 2:55:49 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 2:55:49 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 2:55:49 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 2:55:49 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 2:55:49 PM	44966
Surr: 2-Fluorophenol	38.4	0	15-101		%Rec	1	5/24/2019 2:55:49 PM	44966
Surr: Phenol-d5	31.2	0	15-84.6		%Rec	1	5/24/2019 2:55:49 PM	44966
Surr: 2,4,6-Tribromophenol	56.1	0	27.8-112		%Rec	1	5/24/2019 2:55:49 PM	44966
Surr: Nitrobenzene-d5	69.2	0	33-113		%Rec	1	5/24/2019 2:55:49 PM	44966
Surr: 2-Fluorobiphenyl	52.8	0	26.6-107		%Rec	1	5/24/2019 2:55:49 PM	44966
Surr: 4-Terphenyl-d14	69.1	0	18.7-148		%Rec	1	5/24/2019 2:55:49 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Naphthalene	ND	0.28	2.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/22/2019 5:45:07 PM	R60108

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EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Acetone	5.2	1.2	10	J	µg/L	1	5/22/2019 5:45:07 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 5:45:07 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 5:45:07 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Chloroform	0.78	0.12	1.0	J	µg/L	1	5/22/2019 5:45:07 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 5:45:07 PM	R60108
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 5:45:07 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 9:44:00 AM
Lab ID: 1905710-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Tetrachloroethene (PCE)	0.51	0.15	1.0	J	µg/L	1	5/22/2019 5:45:07 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 5:45:07 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 5:45:07 PM	R60108
Surr: 1,2-Dichloroethane-d4	84.1	0	70-130		%Rec	1	5/22/2019 5:45:07 PM	R60108
Surr: 4-Bromofluorobenzene	93.6	0	70-130		%Rec	1	5/22/2019 5:45:07 PM	R60108
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	5/22/2019 5:45:07 PM	R60108
Surr: Toluene-d8	86.3	0	70-130		%Rec	1	5/22/2019 5:45:07 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	5/22/2019 5:45:07 PM	G60108
Surr: BFB	98.4	0	70-130		%Rec	1	5/22/2019 5:45:07 PM	G60108

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 11:10:00 AM
Lab ID: 1905710-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/15/2019 12:29:56 AM	R59859
Chloride	7.8	0.31	2.5		mg/L	5	5/15/2019 12:29:56 AM	R59859
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/15/2019 12:29:56 AM	R59859
Bromide	ND	0.089	0.50		mg/L	5	5/15/2019 12:29:56 AM	R59859
Nitrogen, Nitrate (As N)	0.18	0.027	0.50	J	mg/L	5	5/15/2019 12:29:56 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 12:29:56 AM	R59859
Sulfate	410	1.1	10		mg/L	20	5/15/2019 12:42:21 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/28/2019 8:01:52 PM	A60216
Barium	0.013	0.00065	0.0020		mg/L	1	5/28/2019 8:01:52 PM	A60216
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 8:01:52 PM	A60216
Boron	0.050	0.0045	0.040		mg/L	1	5/28/2019 8:01:52 PM	A60216
Cadmium	ND	0.00055	0.0020		mg/L	1	5/28/2019 8:01:52 PM	A60216
Calcium	170	0.62	10		mg/L	10	5/28/2019 8:04:14 PM	A60216
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 8:01:52 PM	A60216
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 8:01:52 PM	A60216
Copper	ND	0.0013	0.0060		mg/L	1	5/28/2019 8:01:52 PM	A60216
Iron	0.033	0.0087	0.020		mg/L	1	5/28/2019 8:01:52 PM	A60216
Magnesium	41	0.050	1.0		mg/L	1	5/28/2019 8:01:52 PM	A60216
Manganese	0.00049	0.00029	0.0020	J	mg/L	1	5/28/2019 8:01:52 PM	A60216
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 8:01:52 PM	A60216
Nickel	ND	0.0040	0.010		mg/L	1	5/28/2019 8:01:52 PM	A60216
Potassium	1.2	0.16	1.0		mg/L	1	5/28/2019 8:01:52 PM	A60216
Silver	0.0020	0.00094	0.0050	J	mg/L	1	5/28/2019 8:01:52 PM	A60216
Sodium	18	0.42	1.0		mg/L	1	5/28/2019 8:01:52 PM	A60216
Zinc	0.038	0.0023	0.010		mg/L	1	5/28/2019 8:01:52 PM	A60216
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/28/2019 5:28:49 PM	A60216
Barium	0.013	0.00065	0.0020		mg/L	1	5/28/2019 5:28:49 PM	A60216
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 5:28:49 PM	A60216
Boron	0.050	0.0045	0.040		mg/L	1	5/28/2019 5:28:49 PM	A60216
Cadmium	ND	0.00074	0.0020		mg/L	1	5/28/2019 5:28:49 PM	A60216
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 5:28:49 PM	A60216
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 5:28:49 PM	A60216
Copper	ND	0.0041	0.0060		mg/L	1	5/28/2019 5:28:49 PM	A60216
Iron	0.068	0.0087	0.020		mg/L	1	5/28/2019 5:28:49 PM	A60216
Manganese	ND	0.00029	0.0020		mg/L	1	5/28/2019 5:28:49 PM	A60216
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 5:28:49 PM	A60216

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 11:10:00 AM
Lab ID: 1905710-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	ND	0.0040	0.010		mg/L	1	5/28/2019 5:28:49 PM	A60216
Silver	ND	0.0014	0.0050		mg/L	1	5/28/2019 5:28:49 PM	A60216
Zinc	ND	0.0058	0.010		mg/L	1	5/28/2019 5:28:49 PM	A60216
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:11:41 PM	D59904
Arsenic	0.0031	0.00050	0.0050	J	mg/L	5	5/15/2019 5:11:41 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:11:41 PM	D59904
Selenium	0.0017	0.00086	0.0050	J	mg/L	5	5/15/2019 5:11:41 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:11:41 PM	D59904
Uranium	0.0015	0.00037	0.0025	J	mg/L	5	5/15/2019 5:11:41 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 7:07:49 PM	A60214
Arsenic	0.0031	0.00031	0.0010		mg/L	1	5/23/2019 9:48:04 PM	B60134
Lead	ND	0.000055	0.00050		mg/L	1	5/23/2019 9:48:04 PM	B60134
Selenium	0.00089	0.00048	0.0010	J	mg/L	1	5/23/2019 9:48:04 PM	B60134
Thallium	ND	0.000052	0.00050		mg/L	1	5/23/2019 9:48:04 PM	B60134
Uranium	0.0014	0.000085	0.00050		mg/L	1	5/23/2019 9:48:04 PM	B60134
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:50:03 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 3:25:23 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/24/2019 3:25:23 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 11:10:00 AM
Lab ID: 1905710-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 3:25:23 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 3:25:23 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 3:25:23 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 3:25:23 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 3:25:23 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 3:25:23 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 3:25:23 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 3:25:23 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 3:25:23 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 3:25:23 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 3:25:23 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 3:25:23 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 11:10:00 AM
Lab ID: 1905710-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Naphthalene	ND	4.1	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 3:25:23 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 3:25:23 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 3:25:23 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 3:25:23 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 3:25:23 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 3:25:23 PM	44966
Surr: 2-Fluorophenol	65.2	0	15-101		%Rec	1	5/24/2019 3:25:23 PM	44966
Surr: Phenol-d5	44.4	0	15-84.6		%Rec	1	5/24/2019 3:25:23 PM	44966
Surr: 2,4,6-Tribromophenol	79.1	0	27.8-112		%Rec	1	5/24/2019 3:25:23 PM	44966
Surr: Nitrobenzene-d5	90.3	0	33-113		%Rec	1	5/24/2019 3:25:23 PM	44966
Surr: 2-Fluorobiphenyl	68.7	0	26.6-107		%Rec	1	5/24/2019 3:25:23 PM	44966
Surr: 4-Terphenyl-d14	87.2	0	18.7-148		%Rec	1	5/24/2019 3:25:23 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Toluene	ND	0.35	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2,4-Trimethylbenzene	0.23	0.21	1.0	J	µg/L	1	5/21/2019 12:43:20 AM	R60052
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Naphthalene	ND	0.28	2.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Acetone	7.1	1.2	10	J	µg/L	1	5/21/2019 12:43:20 AM	R60052
Bromobenzene	ND	0.24	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Bromoform	ND	0.29	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Bromomethane	ND	0.27	3.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
2-Butanone	ND	2.1	10		µg/L	1	5/21/2019 12:43:20 AM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 11:10:00 AM
Lab ID: 1905710-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Carbon disulfide	ND	0.45	10		µg/L	1	5/21/2019 12:43:20 AM	R60052
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Chloroethane	ND	0.18	2.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Chloroform	ND	0.12	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Chloromethane	ND	0.32	3.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Dibromomethane	ND	0.21	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
2-Hexanone	ND	1.5	10		µg/L	1	5/21/2019 12:43:20 AM	R60052
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2019 12:43:20 AM	R60052
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Styrene	ND	0.19	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 11:10:00 AM
Lab ID: 1905710-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2019 12:43:20 AM	R60052
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/21/2019 12:43:20 AM	R60052
Surr: 1,2-Dichloroethane-d4	89.0	0	70-130		%Rec	1	5/21/2019 12:43:20 AM	R60052
Surr: 4-Bromofluorobenzene	93.1	0	70-130		%Rec	1	5/21/2019 12:43:20 AM	R60052
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	5/21/2019 12:43:20 AM	R60052
Surr: Toluene-d8	84.8	0	70-130		%Rec	1	5/21/2019 12:43:20 AM	R60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 12:26:00 PM
Lab ID: 1905710-009
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/15/2019 12:54:46 AM	R59859
Chloride	32	0.31	2.5		mg/L	5	5/15/2019 12:54:46 AM	R59859
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/15/2019 12:54:46 AM	R59859
Bromide	ND	0.089	0.50		mg/L	5	5/15/2019 12:54:46 AM	R59859
Nitrogen, Nitrate (As N)	0.13	0.027	0.50	J	mg/L	5	5/15/2019 12:54:46 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 12:54:46 AM	R59859
Sulfate	730	1.1	10		mg/L	20	5/15/2019 1:07:10 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/28/2019 8:06:26 PM	A60216
Barium	0.0099	0.00065	0.0020		mg/L	1	5/28/2019 8:06:26 PM	A60216
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 8:06:26 PM	A60216
Boron	0.13	0.0045	0.040		mg/L	1	5/28/2019 8:06:26 PM	A60216
Cadmium	ND	0.00055	0.0020		mg/L	1	5/28/2019 8:06:26 PM	A60216
Calcium	240	0.62	10		mg/L	10	5/24/2019 8:42:13 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 8:06:26 PM	A60216
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 8:06:26 PM	A60216
Copper	ND	0.0013	0.0060		mg/L	1	5/28/2019 8:06:26 PM	A60216
Iron	0.019	0.0087	0.020	J	mg/L	1	5/28/2019 8:06:26 PM	A60216
Magnesium	50	0.050	1.0		mg/L	1	5/28/2019 8:06:26 PM	A60216
Manganese	0.00066	0.00029	0.0020	J	mg/L	1	5/28/2019 8:06:26 PM	A60216
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/28/2019 8:06:26 PM	A60216
Nickel	ND	0.0040	0.010		mg/L	1	5/28/2019 8:06:26 PM	A60216
Potassium	1.5	0.16	1.0		mg/L	1	5/28/2019 8:06:26 PM	A60216
Silver	0.0020	0.00094	0.0050	J	mg/L	1	5/28/2019 8:06:26 PM	A60216
Sodium	72	0.42	1.0		mg/L	1	5/28/2019 8:06:26 PM	A60216
Zinc	0.065	0.0023	0.010		mg/L	1	5/28/2019 8:06:26 PM	A60216
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/28/2019 5:39:17 PM	A60216
Barium	0.010	0.00065	0.0020		mg/L	1	5/28/2019 5:39:17 PM	A60216
Beryllium	ND	0.00028	0.0020		mg/L	1	5/28/2019 5:39:17 PM	A60216
Boron	0.13	0.0045	0.040		mg/L	1	5/28/2019 5:39:17 PM	A60216
Cadmium	ND	0.00074	0.0020		mg/L	1	5/28/2019 5:39:17 PM	A60216
Chromium	ND	0.0015	0.0060		mg/L	1	5/28/2019 5:39:17 PM	A60216
Cobalt	ND	0.0031	0.0060		mg/L	1	5/28/2019 5:39:17 PM	A60216
Copper	ND	0.0041	0.0060		mg/L	1	5/28/2019 5:39:17 PM	A60216
Iron	0.023	0.0087	0.020		mg/L	1	5/28/2019 5:39:17 PM	A60216
Manganese	0.00053	0.00029	0.0020	J	mg/L	1	5/28/2019 5:39:17 PM	A60216
Molybdenum	0.0076	0.0067	0.0080	J	mg/L	1	5/28/2019 5:39:17 PM	A60216

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 12:26:00 PM
Lab ID: 1905710-009
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Nickel	ND	0.0040	0.010		mg/L	1	5/28/2019 5:39:17 PM	A60216
Silver	0.0030	0.0014	0.0050	J	mg/L	1	5/28/2019 5:39:17 PM	A60216
Zinc	ND	0.0058	0.010		mg/L	1	5/28/2019 5:39:17 PM	A60216
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:19:51 PM	D59904
Arsenic	0.0038	0.00050	0.0050	J	mg/L	5	5/15/2019 5:19:51 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:19:51 PM	D59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 5:19:51 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:19:51 PM	D59904
Uranium	0.0014	0.00037	0.0025	J	mg/L	5	5/15/2019 5:19:51 PM	D59904
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 7:15:59 PM	A60214
Arsenic	0.0037	0.00031	0.0010		mg/L	1	5/23/2019 9:56:14 PM	B60134
Lead	ND	0.000055	0.00050		mg/L	1	5/23/2019 9:56:14 PM	B60134
Selenium	0.00077	0.00048	0.0010	J	mg/L	1	5/23/2019 9:56:14 PM	B60134
Thallium	ND	0.000052	0.00050		mg/L	1	5/23/2019 9:56:14 PM	B60134
Uranium	0.0013	0.000085	0.00050		mg/L	1	5/23/2019 9:56:14 PM	B60134
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 2:52:16 PM	44956
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 3:54:53 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/24/2019 3:54:53 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 12:26:00 PM
Lab ID: 1905710-009
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 3:54:53 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 3:54:53 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 3:54:53 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 3:54:53 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 3:54:53 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 3:54:53 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 3:54:53 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 3:54:53 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Fluorene	ND	2.9	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 3:54:53 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 3:54:53 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 3:54:53 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 3:54:53 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 12:26:00 PM
Lab ID: 1905710-009
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Naphthalene	ND	4.1	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 3:54:53 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 3:54:53 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 3:54:53 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 3:54:53 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 3:54:53 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 3:54:53 PM	44966
Surr: 2-Fluorophenol	62.6	0	15-101		%Rec	1	5/24/2019 3:54:53 PM	44966
Surr: Phenol-d5	42.4	0	15-84.6		%Rec	1	5/24/2019 3:54:53 PM	44966
Surr: 2,4,6-Tribromophenol	80.9	0	27.8-112		%Rec	1	5/24/2019 3:54:53 PM	44966
Surr: Nitrobenzene-d5	84.3	0	33-113		%Rec	1	5/24/2019 3:54:53 PM	44966
Surr: 2-Fluorobiphenyl	59.1	0	26.6-107		%Rec	1	5/24/2019 3:54:53 PM	44966
Surr: 4-Terphenyl-d14	84.2	0	18.7-148		%Rec	1	5/24/2019 3:54:53 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Toluene	ND	0.35	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Naphthalene	ND	0.28	2.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Acetone	7.0	1.2	10	J	µg/L	1	5/21/2019 2:09:25 AM	R60052
Bromobenzene	ND	0.24	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Bromoform	ND	0.29	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Bromomethane	ND	0.27	3.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
2-Butanone	ND	2.1	10		µg/L	1	5/21/2019 2:09:25 AM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 12:26:00 PM
Lab ID: 1905710-009
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Carbon disulfide	ND	0.45	10		µg/L	1	5/21/2019 2:09:25 AM	R60052
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Chloroethane	ND	0.18	2.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Chloroform	ND	0.12	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Chloromethane	ND	0.32	3.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Dibromomethane	ND	0.21	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
2-Hexanone	ND	1.5	10		µg/L	1	5/21/2019 2:09:25 AM	R60052
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2019 2:09:25 AM	R60052
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Styrene	ND	0.19	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2019 2ND QTR MKTF Wells
Collection Date: 5/14/2019 12:26:00 PM
Lab ID: 1905710-009
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2019 2:09:25 AM	R60052
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/21/2019 2:09:25 AM	R60052
Surr: 1,2-Dichloroethane-d4	87.8	0	70-130		%Rec	1	5/21/2019 2:09:25 AM	R60052
Surr: 4-Bromofluorobenzene	91.2	0	70-130		%Rec	1	5/21/2019 2:09:25 AM	R60052
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	5/21/2019 2:09:25 AM	R60052
Surr: Toluene-d8	85.9	0	70-130		%Rec	1	5/21/2019 2:09:25 AM	R60052

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	05/28/2019 15:41	WG1286288

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	05/28/2019 15:42	WG1286088

WG1286388

Wet Chemistry by Method 4500CN E-2011

QUALITY CONTROL SUMMARY

L1100112-01,02

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3415510-1 05/28/19 15:25

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1100097-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1100097-04 05/28/19 15:30 • (DUP) R3415510-3 05/28/19 15:32

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1100118-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1100118-04 05/28/19 15:46 • (DUP) R3415510-6 05/28/19 15:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	0.101	0.0972	1	3.83		20

Laboratory Control Sample (LCS)

(LCS) R3415510-2 05/28/19 15:27

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.103	103	85.0-115	

L1100097-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1100097-05 05/28/19 15:33 • (MS) R3415510-4 05/28/19 15:34 • (MSD) R3415510-5 05/28/19 15:35

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0902	0.0907	90.2	90.7	1	75.0-125			0.553	20

L1100118-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1100118-05 05/28/19 15:48 • (MS) R3415510-7 05/28/19 15:51 • (MSD) R3415510-8 05/28/19 15:52

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0222	0.109	0.115	87.8	92.8	1	75.0-125			5.36	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable)
RDL	Reported Detection Limit.
Rec.	Recovery
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable)
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. The chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB-45167**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45167**	RunNo: **60186**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2033205** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0044	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45167**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **45167**	RunNo: **60186**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2033206** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	122	50	150			J
Barium	0.0017	0.0020	0.002000	0	84.9	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	96.4	50	150			J
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0022	0.0020	0.002000	0	110	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.3	50	150			J
Cobalt	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0055	0.0060	0.006000	0	92.4	50	150			J
Manganese	0.0024	0.0020	0.002000	0	119	50	150			
Molybdenum	0.011	0.0080	0.008000	0	133	50	150			
Nickel	0.0066	0.010	0.005000	0	132	50	150			J
Silver	0.0054	0.0050	0.005000	0	108	50	150			
Zinc	0.010	0.010	0.01000	0	103	50	150			

Sample ID: **LCS-45167**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45167**	RunNo: **60186**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2033207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	111	85	115			
Barium	0.49	0.0020	0.5000	0	97.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **LCS-45167** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45167** RunNo: **60186**
Prep Date: **5/23/2019** Analysis Date: **5/24/2019** SeqNo: **2033207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.50	0.0020	0.5000	0	99.6	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.49	0.0060	0.5000	0	98.3	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.2	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.4	85	115			
Molybdenum	0.50	0.0080	0.5000	0	100	85	115			
Nickel	0.48	0.010	0.5000	0	96.6	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.49	0.010	0.5000	0	97.4	85	115			

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A60216** RunNo: **60216**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0091	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034197** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	102	50	150			J
Barium	0.0019	0.0020	0.002000	0	97.3	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.038	0.040	0.04000	0	95.7	50	150			J
Cadmium	0.0027	0.0020	0.002000	0	133	50	150			
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0067	0.0060	0.006000	0	112	50	150			
Cobalt	0.0036	0.0060	0.006000	0	59.5	50	150			J
Copper	0.0052	0.0060	0.006000	0	87.1	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.50	1.0	0.5000	0	99.2	50	150			J
Manganese	0.0019	0.0020	0.002000	0	97.0	50	150			J
Molybdenum	0.0044	0.0080	0.008000	0	54.7	50	150			J
Nickel	0.0028	0.010	0.005000	0	57.0	50	150			J
Potassium	0.46	1.0	0.5000	0	91.6	50	150			J
Silver	0.0040	0.0050	0.005000	0	79.8	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Zinc	0.0065	0.010	0.005000	0	131	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034198** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.49	0.020	0.5000	0	97.6	85	115			
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.48	0.0020	0.5000	0	96.7	85	115			
Boron	0.48	0.040	0.5000	0	95.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.49	0.0060	0.5000	0	98.8	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Magnesium	49	1.0	50.00	0	98.9	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.0	85	115			
Nickel	0.48	0.010	0.5000	0	95.9	85	115			
Potassium	49	1.0	50.00	0	97.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034198** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	96.3	85	115			
Sodium	49	1.0	50.00	0	97.4	85	115			
Zinc	0.48	0.010	0.5000	0	96.4	85	115			

Sample ID: **1905710-003FMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-16**	Batch ID: **45167**	RunNo: **60216**
Prep Date: **5/23/2019**	Analysis Date: **5/28/2019**	SeqNo: **2034343** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.48	0.0020	0.5000	0	96.1	70	130			
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Chromium	0.49	0.0060	0.5000	0	97.0	70	130			
Cobalt	0.47	0.0060	0.5000	0	94.8	70	130			
Copper	0.59	0.0060	0.5000	0	118	70	130			
Molybdenum	0.49	0.0080	0.5000	0	97.7	70	130			
Nickel	0.54	0.010	0.5000	0.05432	97.8	70	130			
Silver	0.11	0.0050	0.1000	0	115	70	130			
Zinc	0.45	0.010	0.5000	0.007929	88.1	70	130			

Sample ID: **1905710-003FMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-16**	Batch ID: **45167**	RunNo: **60216**
Prep Date: **5/23/2019**	Analysis Date: **5/28/2019**	SeqNo: **2034344** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.48	0.0020	0.5000	0	96.3	70	130	0.202	20	
Cadmium	0.50	0.0020	0.5000	0	101	70	130	0.525	20	
Chromium	0.48	0.0060	0.5000	0	95.9	70	130	1.20	20	
Cobalt	0.47	0.0060	0.5000	0	94.1	70	130	0.812	20	
Copper	0.58	0.0060	0.5000	0	117	70	130	0.762	20	
Molybdenum	0.49	0.0080	0.5000	0	97.1	70	130	0.645	20	
Nickel	0.54	0.010	0.5000	0.05432	97.8	70	130	0.0518	20	
Silver	0.11	0.0050	0.1000	0	114	70	130	0.381	20	
Zinc	0.45	0.010	0.5000	0.007929	88.0	70	130	0.0979	20	

Sample ID: **1905710-003FMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-16**	Batch ID: **45167**	RunNo: **60216**
Prep Date: **5/23/2019**	Analysis Date: **5/28/2019**	SeqNo: **2034345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.9	0.010	0.5000	3.506	84.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **1905710-003FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-16** Batch ID: **45167** RunNo: **60216**

Prep Date: **5/23/2019** Analysis Date: **5/28/2019** SeqNo: **2034345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	3.4	0.010	0.5000	2.952	88.0	70	130			

Sample ID: **1905710-003FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-16** Batch ID: **45167** RunNo: **60216**

Prep Date: **5/23/2019** Analysis Date: **5/28/2019** SeqNo: **2034346** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.8	0.010	0.5000	3.408	83.0	70	130	0.318	20	
Manganese	3.3	0.010	0.5000	2.870	92.7	70	130	0.759	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **a60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033107** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0031	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **a60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033108** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0093	0.020	0.01000	0	93.0	50	150			J
Barium	0.0019	0.0020	0.002000	0	95.6	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.038	0.040	0.04000	0	95.1	50	150			J
Cadmium	0.0023	0.0020	0.002000	0	114	50	150			
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Cobalt	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0055	0.0060	0.006000	0	91.2	50	150			J
Iron	0.016	0.020	0.02000	0	78.0	50	150			J
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0036	0.010	0.005000	0	71.8	50	150			J
Potassium	0.39	1.0	0.5000	0	78.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **a60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033108** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0047	0.0050	0.005000	0	93.6	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Zinc	0.0049	0.010	0.005000	0	98.5	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **a60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	96.3	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.4	85	115			
Boron	0.50	0.040	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.50	0.0060	0.5000	0	99.9	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Magnesium	49	1.0	50.00	0	97.6	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.7	85	115			
Nickel	0.48	0.010	0.5000	0	95.9	85	115			
Potassium	48	1.0	50.00	0	95.6	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	47	1.0	50.00	0	93.5	85	115			
Zinc	0.48	0.010	0.5000	0	96.5	85	115			

Sample ID: **MB-E**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								

Sample ID: **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.52	1.0	0.5000	0	104	50	150			J

Sample ID: **LCS-E**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	100	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0091	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	0.00061	0.0020								J
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	102	50	150			J
Barium	0.0019	0.0020	0.002000	0	97.3	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.038	0.040	0.04000	0	95.7	50	150			J
Cadmium	0.0027	0.0020	0.002000	0	133	50	150			
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0067	0.0060	0.006000	0	112	50	150			
Cobalt	0.0036	0.0060	0.006000	0	59.5	50	150			J
Copper	0.0052	0.0060	0.006000	0	87.1	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.50	1.0	0.5000	0	99.2	50	150			J
Manganese	0.0019	0.0020	0.002000	0	97.0	50	150			J
Molybdenum	0.0044	0.0080	0.008000	0	54.7	50	150			J
Nickel	0.0028	0.010	0.005000	0	57.0	50	150			J
Potassium	0.46	1.0	0.5000	0	91.6	50	150			J
Silver	0.0040	0.0050	0.005000	0	79.8	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Zinc	0.0065	0.010	0.005000	0	131	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.49	0.020	0.5000	0	97.6	85	115			
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.48	0.0020	0.5000	0	96.7	85	115			
Boron	0.48	0.040	0.5000	0	95.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.49	0.0060	0.5000	0	98.8	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Magnesium	49	1.0	50.00	0	98.9	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.0	85	115			
Nickel	0.48	0.010	0.5000	0	95.9	85	115			
Potassium	49	1.0	50.00	0	97.8	85	115			
Silver	0.096	0.0050	0.1000	0	96.3	85	115			
Sodium	49	1.0	50.00	0	97.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A60216**	RunNo: **60216**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2035035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0	96.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **B60134**	RunNo: **60134**
Prep Date:	Analysis Date: **5/23/2019**	SeqNo: **2030914** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **B60134**	RunNo: **60134**
Prep Date:	Analysis Date: **5/23/2019**	SeqNo: **2030915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.5	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.5	50	150			J
Selenium	0.00080	0.0010	0.001000	0	79.9	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	92.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.3	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **B60134**	RunNo: **60134**
Prep Date:	Analysis Date: **5/23/2019**	SeqNo: **2030917** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.8	85	115			
Lead	0.012	0.00050	0.01250	0	95.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.8	85	115			
Thallium	0.012	0.00050	0.01250	0	96.1	85	115			
Uranium	0.012	0.00050	0.01250	0	94.4	85	115			

Sample ID: **MB-45167**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **45167**	RunNo: **60158**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2033068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **MSLLLCS-45167** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **45167** RunNo: **60158**

Prep Date: **5/23/2019** Analysis Date: **5/24/2019** SeqNo: **2033069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00087	0.0010	0.001000	0	87.3	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	0.00051	0.00050	0.0005000	0	103	50	150			
Selenium	0.00071	0.0010	0.001000	0	70.8	50	150			J
Thallium	0.00044	0.00050	0.0005000	0	88.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.1	50	150			J

Sample ID: **MSLCS-45167** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **45167** RunNo: **60158**

Prep Date: **5/23/2019** Analysis Date: **5/24/2019** SeqNo: **2033070** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	102	85	115			
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.013	0.00050	0.01250	0	103	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **A60214** RunNo: **60214**

Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **A60214** RunNo: **60214**

Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.1	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **A60214** RunNo: **60214**

Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **PBW** Batch ID: **D59904** RunNo: **59904**

Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **D59904** RunNo: **59904**

Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00086	0.0010	0.001000	0	85.9	50	150			J
Arsenic	0.00097	0.0010	0.001000	0	96.7	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.2	50	150			J
Selenium	0.00057	0.0010	0.001000	0	56.8	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	91.1	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.8	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **LCSW** Batch ID: **D59904** RunNo: **59904**

Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021322** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.5	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	94.2	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Thallium	0.012	0.00050	0.01250	0	95.7	85	115			
Uranium	0.012	0.00050	0.01250	0	94.3	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **PBW** Batch ID: **C59904** RunNo: **59904**

Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021325** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **PBW** Batch ID: **C59904** RunNo: **59904**

Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021325** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **C59904** RunNo: **59904**

Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00084	0.0010	0.001000	0	83.8	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.8	50	150			J
Selenium	0.0012	0.0010	0.001000	0	121	50	150			
Thallium	0.00047	0.00050	0.0005000	0	94.5	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **LCSW** Batch ID: **C59904** RunNo: **59904**

Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.0	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.9	85	115			
Thallium	0.012	0.00050	0.01250	0	96.4	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB-44956**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44956**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-44956**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44956**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59859** RunNo: **59859**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2020028** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59859** RunNo: **59859**
Prep Date: Analysis Date: **5/14/2019** SeqNo: **2020029** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	110	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.2	90	110			
Bromide	2.4	0.10	2.500	0	96.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			
Sulfate	9.8	0.50	10.00	0	98.1	90	110			

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R60098** RunNo: **60098**
Prep Date: Analysis Date: **5/22/2019** SeqNo: **2029834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R60098** RunNo: **60098**
Prep Date: Analysis Date: **5/22/2019** SeqNo: **2029835** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB-45060**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **45060**	RunNo: **60072**
Prep Date: **5/21/2019**	Analysis Date: **5/21/2019**	SeqNo: **2028596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-45060**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **45060**	RunNo: **60072**
Prep Date: **5/21/2019**	Analysis Date: **5/21/2019**	SeqNo: **2028598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.096	0.010	0.1000	0	96.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **MB-44962**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **44962**	RunNo: **59950**
Prep Date: **5/16/2019**	Analysis Date: **5/17/2019**	SeqNo: **2023552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	70	130			

Sample ID: **LCS-44962**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **44962**	RunNo: **59950**
Prep Date: **5/16/2019**	Analysis Date: **5/17/2019**	SeqNo: **2023553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.7	71.8	135			
Surr: DNOP	0.47		0.5000		93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**

02-Jul-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF Wells

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R60052** RunNo: **60052**

Prep Date: Analysis Date: **5/20/2019** SeqNo: **2027944** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.5	70	130			
Toluene	18	1.0	20.00	0	92.1	70	130			
Chlorobenzene	18	1.0	20.00	0	92.1	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.0	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.1	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.6	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	8.5		10.00		84.6	70	130			

Sample ID: **1905710-008a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PW-4** Batch ID: **R60052** RunNo: **60052**

Prep Date: Analysis Date: **5/21/2019** SeqNo: **2027956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	20	1.0	20.00	0	98.5	70	130			
Chlorobenzene	20	1.0	20.00	0	98.9	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.9	67.6	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.8	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.4	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.7	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130			
Surr: Toluene-d8	8.4		10.00		84.4	70	130			

Sample ID: **1905710-008a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PW-4** Batch ID: **R60052** RunNo: **60052**

Prep Date: Analysis Date: **5/21/2019** SeqNo: **2027957** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.5	70	130	6.89	20	
Toluene	18	1.0	20.00	0	88.0	70	130	11.3	20	
Chlorobenzene	18	1.0	20.00	0	90.1	70	130	9.37	20	
1,1-Dichloroethene	18	1.0	20.00	0	90.5	67.6	130	8.92	20	
Trichloroethene (TCE)	17	1.0	20.00	0	85.1	70	130	4.18	20	
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130	0	0	
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130	0	0	
Surr: Toluene-d8	8.5		10.00		85.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60052**	RunNo: **60052**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2027976** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60052**	RunNo: **60052**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2027976** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.8	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.2	70	130			
Surr: Toluene-d8	8.8		10.00		87.7	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030408** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.5	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030408** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	94.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.0	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.5	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.8	70	130			
Surr: Toluene-d8	8.6		10.00		85.9	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.16	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.0		10.00		80.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R60108** RunNo: **60108**
Prep Date: Analysis Date: **5/22/2019** SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.1		10.00		91.1	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.1	70	130			
Surr: Toluene-d8	8.8		10.00		88.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **mb-44966** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44966** RunNo: **60135**
Prep Date: **5/16/2019** Analysis Date: **5/23/2019** SeqNo: **2031051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **mb-44966**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **44966**	RunNo: **60135**
Prep Date: **5/16/2019**	Analysis Date: **5/23/2019**	SeqNo: **2031051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		71.5	15	101			
Surr: Phenol-d5	110		200.0		55.7	15	84.6			
Surr: 2,4,6-Tribromophenol	180		200.0		89.8	27.8	112			
Surr: Nitrobenzene-d5	92		100.0		91.6	33	113			
Surr: 2-Fluorobiphenyl	69		100.0		69.2	26.6	107			
Surr: 4-Terphenyl-d14	92		100.0		91.7	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **lcs-44966** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **44966** RunNo: **60135**
Prep Date: **5/16/2019** Analysis Date: **5/23/2019** SeqNo: **2031052** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	69	10	100.0	0	68.8	32.2	94			
4-Chloro-3-methylphenol	180	10	200.0	0	90.7	37.7	101			
2-Chlorophenol	160	10	200.0	0	78.5	32.6	90.1			
1,4-Dichlorobenzene	48	10	100.0	0	48.4	30	87.2			
2,4-Dinitrotoluene	73	10	100.0	0	72.8	35.9	85.8			
N-Nitrosodi-n-propylamine	82	10	100.0	0	82.1	37.1	108			
4-Nitrophenol	94	10	200.0	0	47.2	22.4	86.6			
Pentachlorophenol	130	20	200.0	0	65.6	31.6	91			
Phenol	99	10	200.0	0	49.7	21.7	84.9			
Pyrene	70	10	100.0	0	70.3	46.3	103			
1,2,4-Trichlorobenzene	55	10	100.0	0	55.4	30.2	88.3			
Surr: 2-Fluorophenol	120		200.0		60.6	15	101			
Surr: Phenol-d5	96		200.0		48.1	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		77.4	27.8	112			
Surr: Nitrobenzene-d5	76		100.0		76.1	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	26.6	107			
Surr: 4-Terphenyl-d14	82		100.0		81.7	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **1905710-009a ms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PW-3**	Batch ID: **G60052**	RunNo: **60052**							
Prep Date:	Analysis Date: **5/21/2019**	SeqNo: **2027987**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	90.2	70	130			
Surr: BFB	9.6		10.00		96.5	70	130			

Sample ID: **1905710-009a msd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PW-3**	Batch ID: **G60052**	RunNo: **60052**							
Prep Date:	Analysis Date: **5/21/2019**	SeqNo: **2027988**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.42	0.050	0.5000	0	83.3	70	130	7.93	20	
Surr: BFB	9.5		10.00		94.9	70	130	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSW**	Batch ID: **G60052**	RunNo: **60052**							
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2028002**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	70	130			
Surr: BFB	9.6		10.00		96.2	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBW**	Batch ID: **G60052**	RunNo: **60052**							
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2028003**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.7		10.00		97.2	70	130			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSW**	Batch ID: **G60108**	RunNo: **60108**							
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030457**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.1	70	130			
Surr: BFB	9.8		10.00		98.3	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBW**	Batch ID: **G60108**	RunNo: **60108**							
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030458**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905710**
02-Jul-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF Wells

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030458** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.9		10.00		99.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1905710 RcptNo: 1

Received By: Isaiah Ortiz 5/14/2019 5:00:00 PM I Ortiz

Completed By: Leah Baca 5/14/2019 4:03:06 PM Leah Baca

Reviewed By: YL 5/14/19 /ENM 5/15/19

Labeled by (unpres.) 5/14/19 ENM / DAD 5/15/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	# of preserved bottles checked for pH: 21 (2) (<2 or >12 unless noted)
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? YL
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JJC 5-15-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.32	Good	Yes			
2	2.37	Good	Yes			
3	3.47	Good	Yes			
4	4.16	Good	Yes			

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Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1905710 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
5	5.05	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package: ☐ Standard X Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other ☐ EDD (Type)

Turn-Around Time: X Standard ☐ Rush

Project Name: 2019 2ND QTR - MKTF WELLS

Project #: MKTF 16, 20, 21, 37; PW 3, 4

Project Manager: BRIAN MOORE

Sampler: DJOHNSON1@MARATHONPETROLEUM.COM

On Ice: Yes ☐ No

Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905710	8260+MTBE	8015D(DRO/MRO/GRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	MAJOR CATIONS/ANIONS		METHOD 8011 - EDB	CYANIDE							Air Bubbles (Y or N)
5/14/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-001	X															
5/14/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	HCL	-002	X															
5/14/2019	735	AQUEOUS	MKTF-16	MISC	MISC	-003	X	X	2	X	X	X										
5/14/2019	747	AQUEOUS	MKTF-20	MISC	MISC	-004	X	X	X	X	X	X										
5/14/2019	814	AQUEOUS	MKTF-21	MISC	MISC	-005	X	X	X	X	X	X										
5/14/2019	936	AQUEOUS	MKTF-37 38	MISC	MISC	-006	X	X	X	X	X	X		X								
5/14/2019	944	AQUEOUS	DUPLICATE	MISC	MISC	-007	X	X	X	X	X	X		X								
5/14/2019	1110	AQUEOUS	PW-4	MISC	MISC	-008	X		X	X	X	X			X							
5/14/2019	1226	AQUEOUS	PW-3	MISC	MISC	-009	X		X	X	X	X			X							

Date: 5/14/19 Time: 1330 Relinquished by:

Received by: Date: 5/14/19 Time: 1534

Date: 5/14/19 Time: 1650 Relinquished by:

Received by: JAC COC 5/14/19 1650

Remarks: 1. 3.2°C 2. 3.7°C 3. 4.9°C 4. 1.6°C 5. 0.5°C

Per Cheryl change MKTF-37 to MKTF-38 JNB 7/2/19

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	05/28/2019 15:41	WG1286388

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	05/28/2019 15:42	WG1286388

Method Blank (MB)

(MB) R3415510-1 05/28/19 15:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1100097-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1100097-04 05/28/19 15:30 • (DUP) R3415510-3 05/28/19 15:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1100118-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1100118-04 05/28/19 15:46 • (DUP) R3415510-6 05/28/19 15:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	0.101	0.0972	1	3.83		20

Laboratory Control Sample (LCS)

(LCS) R3415510-2 05/28/19 15:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.103	103	85.0-115	

L1100097-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1100097-05 05/28/19 15:33 • (MS) R3415510-4 05/28/19 15:34 • (MSD) R3415510-5 05/28/19 15:35

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0902	0.0907	90.2	90.7	1	75.0-125			0.553	20

L1100118-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1100118-05 05/28/19 15:48 • (MS) R3415510-7 05/28/19 15:51 • (MSD) R3415510-8 05/28/19 15:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0222	0.109	0.115	86.8	92.8	1	75.0-125			5.36	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 10, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX:

RE: 2019 2ND QTR MKTF WELLS OrderNo.: 1905716

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 8 sample(s) on 5/14/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 7:00:00 AM
Lab ID: 1905716-001 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Toluene	ND	0.35	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Naphthalene	ND	0.28	2.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Acetone	ND	1.2	10		µg/L	1	5/21/2019 3:35:29 AM	R60052
Bromobenzene	ND	0.24	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Bromoform	ND	0.29	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Bromomethane	ND	0.27	3.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
2-Butanone	ND	2.1	10		µg/L	1	5/21/2019 3:35:29 AM	R60052
Carbon disulfide	ND	0.45	10		µg/L	1	5/21/2019 3:35:29 AM	R60052
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Chloroethane	ND	0.18	2.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Chloroform	ND	0.12	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Chloromethane	ND	0.32	3.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Dibromomethane	ND	0.21	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/21/2019 3:35:29 AM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 7:00:00 AM
Lab ID: 1905716-001 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
2-Hexanone	ND	1.5	10		µg/L	1	5/21/2019 3:35:29 AM	R60052
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2019 3:35:29 AM	R60052
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Styrene	ND	0.19	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2019 3:35:29 AM	R60052
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/21/2019 3:35:29 AM	R60052
Surr: 1,2-Dichloroethane-d4	88.4	0	70-130		%Rec	1	5/21/2019 3:35:29 AM	R60052
Surr: 4-Bromofluorobenzene	93.4	0	70-130		%Rec	1	5/21/2019 3:35:29 AM	R60052
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	5/21/2019 3:35:29 AM	R60052
Surr: Toluene-d8	85.2	0	70-130		%Rec	1	5/21/2019 3:35:29 AM	R60052

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR MKTF WELLS
Collection Date:
Lab ID: 1905716-002
Matrix: TRIP BLANK
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Toluene	ND	0.35	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Naphthalene	ND	0.28	2.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Acetone	ND	1.2	10		µg/L	1	5/21/2019 4:04:08 AM	R60052
Bromobenzene	ND	0.24	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Bromoform	ND	0.29	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Bromomethane	ND	0.27	3.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
2-Butanone	ND	2.1	10		µg/L	1	5/21/2019 4:04:08 AM	R60052
Carbon disulfide	ND	0.45	10		µg/L	1	5/21/2019 4:04:08 AM	R60052
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Chloroethane	ND	0.18	2.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Chloroform	ND	0.12	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Chloromethane	ND	0.32	3.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Dibromomethane	ND	0.21	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/21/2019 4:04:08 AM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR MKTF WELLS
Collection Date:
Lab ID: 1905716-002
Matrix: TRIP BLANK
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
2-Hexanone	ND	1.5	10		µg/L	1	5/21/2019 4:04:08 AM	R60052
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2019 4:04:08 AM	R60052
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Styrene	ND	0.19	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2019 4:04:08 AM	R60052
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/21/2019 4:04:08 AM	R60052
Surr: 1,2-Dichloroethane-d4	87.6	0	70-130		%Rec	1	5/21/2019 4:04:08 AM	R60052
Surr: 4-Bromofluorobenzene	91.0	0	70-130		%Rec	1	5/21/2019 4:04:08 AM	R60052
Surr: Dibromofluoromethane	98.1	0	70-130		%Rec	1	5/21/2019 4:04:08 AM	R60052
Surr: Toluene-d8	86.0	0	70-130		%Rec	1	5/21/2019 4:04:08 AM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:55:00 PM
Lab ID: 1905716-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/22/2019 4:11:35 AM	45060
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	5.4	0.35	1.0		mg/L	1	5/17/2019 4:05:12 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 4:05:12 PM	44962
Surr: DNOP	116	0	70-130		%Rec	1	5/17/2019 4:05:12 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.25	0.50		mg/L	5	5/15/2019 1:19:35 AM	R59859
Chloride	260	1.2	10		mg/L	20	5/15/2019 1:32:00 AM	R59859
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/15/2019 1:19:35 AM	R59859
Bromide	2.4	0.089	0.50		mg/L	5	5/15/2019 1:19:35 AM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/15/2019 1:19:35 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 1:19:35 AM	R59859
Sulfate	5.6	0.27	2.5		mg/L	5	5/15/2019 1:19:35 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 8:44:29 PM	E60186
Barium	3.3	0.0065	0.020	*	mg/L	10	5/24/2019 8:53:10 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 8:44:29 PM	E60186
Boron	0.48	0.0045	0.040		mg/L	1	5/24/2019 8:44:29 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 8:44:29 PM	E60186
Calcium	130	0.62	10		mg/L	10	5/24/2019 8:53:10 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 8:44:29 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 8:44:29 PM	E60186
Copper	ND	0.0013	0.0060		mg/L	1	5/24/2019 8:44:29 PM	E60186
Iron	4.5	0.087	0.20	*	mg/L	10	5/24/2019 8:53:10 PM	E60186
Magnesium	32	0.050	1.0		mg/L	1	5/24/2019 8:44:29 PM	E60186
Manganese	1.6	0.0029	0.020	*	mg/L	10	5/24/2019 8:53:10 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 8:44:29 PM	E60186
Nickel	0.0076	0.0040	0.010	J	mg/L	1	5/24/2019 8:44:29 PM	E60186
Potassium	0.46	0.16	1.0	J	mg/L	1	5/24/2019 8:44:29 PM	E60186
Silver	0.0021	0.00094	0.0050	J	mg/L	1	5/24/2019 8:44:29 PM	E60186
Sodium	360	4.2	10		mg/L	10	5/24/2019 8:53:10 PM	E60186
Zinc	0.015	0.0023	0.010		mg/L	1	5/24/2019 8:44:29 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.2	0.0050	0.040	*	mg/L	2	6/3/2019 3:05:09 PM	45220
Barium	3.4	0.0032	0.010	*	mg/L	5	5/30/2019 8:33:43 PM	45220
Beryllium	ND	0.00028	0.0020		mg/L	1	5/30/2019 8:31:41 PM	45220
Boron	0.46	0.0045	0.040		mg/L	1	5/30/2019 8:31:41 PM	45220

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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ND	Not Detected at the Reporting Limit
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:55:00 PM
Lab ID: 1905716-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 8:31:41 PM	45220
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 8:31:41 PM	45220
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 8:31:41 PM	45220
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 8:31:41 PM	45220
Iron	8.0	0.087	0.20	*	mg/L	10	5/30/2019 8:35:56 PM	45220
Manganese	1.6	0.0014	0.010	*	mg/L	5	5/30/2019 8:33:43 PM	45220
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 8:31:41 PM	45220
Nickel	0.0080	0.0040	0.010	J	mg/L	1	5/30/2019 8:31:41 PM	45220
Silver	0.0017	0.0014	0.0050	J	mg/L	1	5/30/2019 8:31:41 PM	45220
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 8:31:41 PM	45220
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:22:34 PM	D59904
Arsenic	0.0081	0.00050	0.0050		mg/L	5	5/15/2019 5:22:34 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:22:34 PM	D59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 5:22:34 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:22:34 PM	D59904
Uranium	0.0018	0.00037	0.0025	J	mg/L	5	5/15/2019 5:22:34 PM	D59904
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 5:14:51 PM	45220
Arsenic	0.0086	0.00031	0.0010		mg/L	1	5/29/2019 5:14:51 PM	45220
Lead	0.00080	0.000055	0.00050		mg/L	1	5/29/2019 5:14:51 PM	45220
Selenium	0.00073	0.00048	0.0010	J	mg/L	1	5/29/2019 5:14:51 PM	45220
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 5:14:51 PM	45220
Uranium	0.0017	0.000085	0.00050		mg/L	1	5/29/2019 5:14:51 PM	45220
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 1:22:12 PM	44957
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	5.7	3.0	10	J	µg/L	1	5/24/2019 4:24:31 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 4:24:31 PM	44966

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:55:00 PM
Lab ID: 1905716-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 4:24:31 PM	44966
Benzyl alcohol	2.4	2.4	10	J	µg/L	1	5/24/2019 4:24:31 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Bis(2-ethylhexyl)phthalate	4.9	4.3	10	J	µg/L	1	5/24/2019 4:24:31 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Carbazole	17	2.9	10		µg/L	1	5/24/2019 4:24:31 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 4:24:31 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 4:24:31 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 4:24:31 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 4:24:31 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 4:24:31 PM	44966
2,4-Dimethylphenol	4.4	3.0	10	J	µg/L	1	5/24/2019 4:24:31 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 4:24:31 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 4:24:31 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Fluorene	8.2	2.9	10	J	µg/L	1	5/24/2019 4:24:31 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:55:00 PM
Lab ID: 1905716-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	150	3.1	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2-Methylnaphthalene	170	3.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 4:24:31 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 4:24:31 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 4:24:31 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Naphthalene	250	21	50		µg/L	5	5/25/2019 9:57:02 AM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 4:24:31 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 4:24:31 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 4:24:31 PM	44966
Phenanthrene	5.5	2.8	10	J	µg/L	1	5/24/2019 4:24:31 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 4:24:31 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 4:24:31 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 4:24:31 PM	44966
Surr: 2-Fluorophenol	51.0	0	15-101		%Rec	1	5/24/2019 4:24:31 PM	44966
Surr: Phenol-d5	43.5	0	15-84.6		%Rec	1	5/24/2019 4:24:31 PM	44966
Surr: 2,4,6-Tribromophenol	81.6	0	27.8-112		%Rec	1	5/24/2019 4:24:31 PM	44966
Surr: Nitrobenzene-d5	91.4	0	33-113		%Rec	1	5/24/2019 4:24:31 PM	44966
Surr: 2-Fluorobiphenyl	63.3	0	26.6-107		%Rec	1	5/24/2019 4:24:31 PM	44966
Surr: 4-Terphenyl-d14	89.4	0	18.7-148		%Rec	1	5/24/2019 4:24:31 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	770	8.3	50		µg/L	50	5/21/2019 4:32:48 AM	R60052
Toluene	13	1.8	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Ethylbenzene	620	6.6	50		µg/L	50	5/21/2019 4:32:48 AM	R60052
Methyl tert-butyl ether (MTBE)	1700	23	50		µg/L	50	5/21/2019 4:32:48 AM	R60052
1,2,4-Trimethylbenzene	410	1.1	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,3,5-Trimethylbenzene	83	0.94	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2-Dichloroethane (EDC)	1.6	0.97	5.0	J	µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Naphthalene	320	1.4	10		µg/L	5	5/21/2019 5:01:26 AM	R60052
1-Methylnaphthalene	210	1.6	20		µg/L	5	5/21/2019 5:01:26 AM	R60052

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:55:00 PM
Lab ID: 1905716-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	200	1.7	20		µg/L	5	5/21/2019 5:01:26 AM	R60052
Acetone	ND	6.0	50		µg/L	5	5/21/2019 5:01:26 AM	R60052
Bromobenzene	ND	1.2	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Bromoform	ND	1.4	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Bromomethane	ND	1.4	15		µg/L	5	5/21/2019 5:01:26 AM	R60052
2-Butanone	ND	10	50		µg/L	5	5/21/2019 5:01:26 AM	R60052
Carbon disulfide	ND	2.3	50		µg/L	5	5/21/2019 5:01:26 AM	R60052
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Chloroethane	ND	0.89	10		µg/L	5	5/21/2019 5:01:26 AM	R60052
Chloroform	ND	0.61	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Chloromethane	ND	1.6	15		µg/L	5	5/21/2019 5:01:26 AM	R60052
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/21/2019 5:01:26 AM	R60052
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Dibromomethane	ND	1.0	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,1-Dichloroethane	5.4	0.70	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,1-Dichloroethene	7.5	1.0	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
2-Hexanone	ND	7.7	50		µg/L	5	5/21/2019 5:01:26 AM	R60052
Isopropylbenzene	26	0.96	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
4-Isopropyltoluene	4.0	1.1	5.0	J	µg/L	5	5/21/2019 5:01:26 AM	R60052
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/21/2019 5:01:26 AM	R60052
Methylene Chloride	ND	0.77	15		µg/L	5	5/21/2019 5:01:26 AM	R60052
n-Butylbenzene	ND	1.1	15		µg/L	5	5/21/2019 5:01:26 AM	R60052
n-Propylbenzene	54	1.1	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
sec-Butylbenzene	4.1	1.2	5.0	J	µg/L	5	5/21/2019 5:01:26 AM	R60052

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:55:00 PM
Lab ID: 1905716-003
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.96	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/21/2019 5:01:26 AM	R60052
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Trichloroethene (TCE)	0.87	0.83	5.0	J	µg/L	5	5/21/2019 5:01:26 AM	R60052
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/21/2019 5:01:26 AM	R60052
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/21/2019 5:01:26 AM	R60052
Xylenes, Total	730	2.3	7.5		µg/L	5	5/21/2019 5:01:26 AM	R60052
Surr: 1,2-Dichloroethane-d4	91.9	0	70-130		%Rec	5	5/21/2019 5:01:26 AM	R60052
Surr: 4-Bromofluorobenzene	95.4	0	70-130		%Rec	5	5/21/2019 5:01:26 AM	R60052
Surr: Dibromofluoromethane	98.5	0	70-130		%Rec	5	5/21/2019 5:01:26 AM	R60052
Surr: Toluene-d8	86.0	0	70-130		%Rec	5	5/21/2019 5:01:26 AM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	9.6	0.15	0.25		mg/L	5	5/21/2019 5:01:26 AM	G60052
Surr: BFB	98.9	0	70-130		%Rec	5	5/21/2019 5:01:26 AM	G60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:06:00 PM
Lab ID: 1905716-004 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	5/22/2019 4:26:30 AM	45060
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	5.6	0.35	1.0		mg/L	1	5/17/2019 4:29:40 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 4:29:40 PM	44962
Surr: DNOP	119	0	70-130		%Rec	1	5/17/2019 4:29:40 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.25	0.50		mg/L	5	5/15/2019 1:44:25 AM	R59859
Chloride	240	1.2	10		mg/L	20	5/15/2019 1:56:50 AM	R59859
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/15/2019 1:44:25 AM	R59859
Bromide	2.4	0.089	0.50		mg/L	5	5/15/2019 1:44:25 AM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/15/2019 1:44:25 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 1:44:25 AM	R59859
Sulfate	5.3	0.27	2.5		mg/L	5	5/15/2019 1:44:25 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 8:55:29 PM	E60186
Barium	3.2	0.0065	0.020	*	mg/L	10	5/24/2019 8:57:30 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 8:55:29 PM	E60186
Boron	0.48	0.0045	0.040		mg/L	1	5/24/2019 8:55:29 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 8:55:29 PM	E60186
Calcium	130	0.62	10		mg/L	10	5/24/2019 8:57:30 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 8:55:29 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 8:55:29 PM	E60186
Copper	0.0030	0.0013	0.0060	J	mg/L	1	5/24/2019 8:55:29 PM	E60186
Iron	4.2	0.087	0.20	*	mg/L	10	5/24/2019 8:57:30 PM	E60186
Magnesium	32	0.050	1.0		mg/L	1	5/24/2019 8:55:29 PM	E60186
Manganese	1.6	0.0029	0.020	*	mg/L	10	5/24/2019 8:57:30 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 8:55:29 PM	E60186
Nickel	0.0097	0.0040	0.010	J	mg/L	1	5/24/2019 8:55:29 PM	E60186
Potassium	0.51	0.16	1.0	J	mg/L	1	5/24/2019 8:55:29 PM	E60186
Silver	0.0024	0.00094	0.0050	J	mg/L	1	5/24/2019 8:55:29 PM	E60186
Sodium	360	4.2	10		mg/L	10	5/24/2019 8:57:30 PM	E60186
Zinc	0.038	0.0023	0.010		mg/L	1	5/24/2019 8:55:29 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.6	0.012	0.10	*	mg/L	5	6/6/2019 2:49:56 PM	45402
Barium	3.3	0.0032	0.010	*	mg/L	5	5/30/2019 8:40:15 PM	45220
Beryllium	ND	0.00028	0.0020		mg/L	1	5/30/2019 8:38:13 PM	45220
Boron	0.45	0.0045	0.040		mg/L	1	5/30/2019 8:38:13 PM	45220

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EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 8:38:13 PM	45220
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 8:38:13 PM	45220
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 8:38:13 PM	45220
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 8:38:13 PM	45220
Iron	7.3	0.087	0.20	*	mg/L	10	5/30/2019 8:49:19 PM	45220
Manganese	1.6	0.0014	0.010	*	mg/L	5	5/30/2019 8:40:15 PM	45220
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 8:38:13 PM	45220
Nickel	0.0079	0.0040	0.010	J	mg/L	1	5/30/2019 8:38:13 PM	45220
Silver	ND	0.0014	0.0050		mg/L	1	5/30/2019 8:38:13 PM	45220
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 8:38:13 PM	45220
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:30:42 PM	D59904
Arsenic	0.0077	0.00050	0.0050		mg/L	5	5/15/2019 5:30:42 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:30:42 PM	D59904
Selenium	0.0011	0.00086	0.0050	J	mg/L	5	5/15/2019 5:30:42 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:30:42 PM	D59904
Uranium	0.0019	0.00037	0.0025	J	mg/L	5	5/15/2019 5:30:42 PM	D59904
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 5:17:02 PM	45220
Arsenic	0.0082	0.00031	0.0010		mg/L	1	5/29/2019 5:17:02 PM	45220
Lead	0.00065	0.000055	0.00050		mg/L	1	5/29/2019 5:17:02 PM	45220
Selenium	ND	0.00048	0.0010		mg/L	1	5/29/2019 5:17:02 PM	45220
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 5:17:02 PM	45220
Uranium	0.0016	0.000085	0.00050		mg/L	1	5/29/2019 5:17:02 PM	45220
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 1:28:50 PM	44957
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	4.4	3.0	10	J	µg/L	1	5/24/2019 4:54:07 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 4:54:07 PM	44966

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 4:54:07 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/24/2019 4:54:07 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Carbazole	12	2.9	10		µg/L	1	5/24/2019 4:54:07 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 4:54:07 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 4:54:07 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 4:54:07 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 4:54:07 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 4:54:07 PM	44966
2,4-Dimethylphenol	3.5	3.0	10	J	µg/L	1	5/24/2019 4:54:07 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 4:54:07 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 4:54:07 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Fluorene	7.0	2.9	10	J	µg/L	1	5/24/2019 4:54:07 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	110	3.1	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2-Methylnaphthalene	130	3.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 4:54:07 PM	44966
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 4:54:07 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 4:54:07 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Naphthalene	220	4.1	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 4:54:07 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 4:54:07 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 4:54:07 PM	44966
Phenanthrene	4.4	2.8	10	J	µg/L	1	5/24/2019 4:54:07 PM	44966
Phenol	ND	8.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 4:54:07 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 4:54:07 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 4:54:07 PM	44966
Surr: 2-Fluorophenol	42.0	0	15-101		%Rec	1	5/24/2019 4:54:07 PM	44966
Surr: Phenol-d5	31.6	0	15-84.6		%Rec	1	5/24/2019 4:54:07 PM	44966
Surr: 2,4,6-Tribromophenol	66.4	0	27.8-112		%Rec	1	5/24/2019 4:54:07 PM	44966
Surr: Nitrobenzene-d5	60.9	0	33-113		%Rec	1	5/24/2019 4:54:07 PM	44966
Surr: 2-Fluorobiphenyl	38.3	0	26.6-107		%Rec	1	5/24/2019 4:54:07 PM	44966
Surr: 4-Terphenyl-d14	74.2	0	18.7-148		%Rec	1	5/24/2019 4:54:07 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	810	8.3	50		µg/L	50	5/21/2019 7:53:28 AM	R60052
Toluene	13	1.8	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Ethylbenzene	630	6.6	50		µg/L	50	5/21/2019 7:53:28 AM	R60052
Methyl tert-butyl ether (MTBE)	1800	23	50		µg/L	50	5/21/2019 7:53:28 AM	R60052
1,2,4-Trimethylbenzene	420	1.1	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,3,5-Trimethylbenzene	85	0.94	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2-Dichloroethane (EDC)	1.6	0.97	5.0	J	µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Naphthalene	340	1.4	10		µg/L	5	5/21/2019 8:22:12 AM	R60052
1-Methylnaphthalene	220	1.6	20		µg/L	5	5/21/2019 8:22:12 AM	R60052

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EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	200	1.7	20		µg/L	5	5/21/2019 8:22:12 AM	R60052
Acetone	ND	6.0	50		µg/L	5	5/21/2019 8:22:12 AM	R60052
Bromobenzene	ND	1.2	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Bromoform	ND	1.4	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Bromomethane	ND	1.4	15		µg/L	5	5/21/2019 8:22:12 AM	R60052
2-Butanone	ND	10	50		µg/L	5	5/21/2019 8:22:12 AM	R60052
Carbon disulfide	ND	2.3	50		µg/L	5	5/21/2019 8:22:12 AM	R60052
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Chloroethane	ND	0.89	10		µg/L	5	5/21/2019 8:22:12 AM	R60052
Chloroform	ND	0.61	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Chloromethane	ND	1.6	15		µg/L	5	5/21/2019 8:22:12 AM	R60052
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/21/2019 8:22:12 AM	R60052
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Dibromomethane	ND	1.0	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,1-Dichloroethane	5.0	0.70	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,1-Dichloroethene	8.1	1.0	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
2-Hexanone	ND	7.7	50		µg/L	5	5/21/2019 8:22:12 AM	R60052
Isopropylbenzene	25	0.96	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
4-Isopropyltoluene	4.2	1.1	5.0	J	µg/L	5	5/21/2019 8:22:12 AM	R60052
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/21/2019 8:22:12 AM	R60052
Methylene Chloride	ND	0.77	15		µg/L	5	5/21/2019 8:22:12 AM	R60052
n-Butylbenzene	ND	1.1	15		µg/L	5	5/21/2019 8:22:12 AM	R60052
n-Propylbenzene	56	1.1	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
sec-Butylbenzene	4.1	1.2	5.0	J	µg/L	5	5/21/2019 8:22:12 AM	R60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:06:00 PM
Lab ID: 1905716-004 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.96	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/21/2019 8:22:12 AM	R60052
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Trichloroethene (TCE)	1.0	0.83	5.0	J	µg/L	5	5/21/2019 8:22:12 AM	R60052
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/21/2019 8:22:12 AM	R60052
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/21/2019 8:22:12 AM	R60052
Xylenes, Total	750	2.3	7.5		µg/L	5	5/21/2019 8:22:12 AM	R60052
Surr: 1,2-Dichloroethane-d4	91.2	0	70-130		%Rec	5	5/21/2019 8:22:12 AM	R60052
Surr: 4-Bromofluorobenzene	94.5	0	70-130		%Rec	5	5/21/2019 8:22:12 AM	R60052
Surr: Dibromofluoromethane	97.1	0	70-130		%Rec	5	5/21/2019 8:22:12 AM	R60052
Surr: Toluene-d8	86.2	0	70-130		%Rec	5	5/21/2019 8:22:12 AM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	9.8	0.15	0.25		mg/L	5	5/21/2019 8:22:12 AM	G60052
Surr: BFB	97.8	0	70-130		%Rec	5	5/21/2019 8:22:12 AM	G60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:20:00 PM
Lab ID: 1905716-005 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	1.5	0.35	1.0		mg/L	1	5/17/2019 4:53:54 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 4:53:54 PM	44962
Surr: DNOP	117	0	70-130		%Rec	1	5/17/2019 4:53:54 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/15/2019 2:09:14 AM	R59859
Chloride	760	3.1	25		mg/L	50	5/22/2019 12:56:24 PM	R60098
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/15/2019 2:09:14 AM	R59859
Bromide	0.79	0.089	0.50		mg/L	5	5/15/2019 2:09:14 AM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/15/2019 2:09:14 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 2:09:14 AM	R59859
Sulfate	6.3	0.27	2.5		mg/L	5	5/15/2019 2:09:14 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 8:59:48 PM	E60186
Barium	2.1	0.0065	0.020	*	mg/L	10	5/24/2019 9:01:49 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 8:59:48 PM	E60186
Boron	0.55	0.0045	0.040		mg/L	1	5/24/2019 8:59:48 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 8:59:48 PM	E60186
Calcium	120	0.62	10		mg/L	10	5/24/2019 9:01:49 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 8:59:48 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 8:59:48 PM	E60186
Copper	0.0043	0.0013	0.0060	J	mg/L	1	5/24/2019 8:59:48 PM	E60186
Iron	3.1	0.087	0.20	*	mg/L	10	5/24/2019 9:01:49 PM	E60186
Magnesium	32	0.050	1.0		mg/L	1	5/24/2019 8:59:48 PM	E60186
Manganese	2.4	0.0029	0.020	*	mg/L	10	5/24/2019 9:01:49 PM	E60186
Molybdenum	0.012	0.0067	0.0080		mg/L	1	5/24/2019 8:59:48 PM	E60186
Nickel	0.042	0.0040	0.010		mg/L	1	5/24/2019 8:59:48 PM	E60186
Potassium	0.71	0.16	1.0	J	mg/L	1	5/24/2019 8:59:48 PM	E60186
Silver	0.0020	0.00094	0.0050	J	mg/L	1	5/24/2019 8:59:48 PM	E60186
Sodium	650	4.2	10		mg/L	10	5/24/2019 9:01:49 PM	E60186
Zinc	0.098	0.0023	0.010		mg/L	1	5/24/2019 8:59:48 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.88	0.0025	0.020	*	mg/L	1	6/6/2019 2:05:47 PM	45402
Barium	2.3	0.0032	0.010	*	mg/L	5	5/30/2019 8:53:41 PM	45220
Beryllium	0.00029	0.00028	0.0020	J	mg/L	1	5/30/2019 8:51:39 PM	45220
Boron	0.55	0.0045	0.040		mg/L	1	5/30/2019 8:51:39 PM	45220
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 8:51:39 PM	45220
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 8:51:39 PM	45220
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 8:51:39 PM	45220

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:20:00 PM
Lab ID: 1905716-005
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 8:51:39 PM	45220
Iron	5.0	0.087	0.20	*	mg/L	10	5/30/2019 8:55:41 PM	45220
Manganese	2.6	0.0014	0.010	*	mg/L	5	5/30/2019 8:53:41 PM	45220
Molybdenum	0.012	0.0067	0.0080		mg/L	1	5/30/2019 8:51:39 PM	45220
Nickel	0.047	0.0040	0.010		mg/L	1	5/30/2019 8:51:39 PM	45220
Silver	0.0019	0.0014	0.0050	J	mg/L	1	5/30/2019 8:51:39 PM	45220
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 8:51:39 PM	45220
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:33:24 PM	D59904
Arsenic	0.016	0.00050	0.0050	*	mg/L	5	5/15/2019 5:33:24 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:33:24 PM	D59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 5:33:24 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:33:24 PM	D59904
Uranium	0.0045	0.00037	0.0025		mg/L	5	5/15/2019 5:33:24 PM	D59904
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 5:19:13 PM	45220
Arsenic	0.018	0.00031	0.0010	*	mg/L	1	5/29/2019 5:19:13 PM	45220
Lead	0.00063	0.000055	0.00050		mg/L	1	5/29/2019 5:19:13 PM	45220
Selenium	ND	0.00048	0.0010		mg/L	1	5/29/2019 5:19:13 PM	45220
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 5:19:13 PM	45220
Uranium	0.0045	0.000085	0.00050		mg/L	1	5/29/2019 5:19:13 PM	45220
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	5/16/2019 1:31:04 PM	44957
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Aniline	4.9	3.6	10	J	µg/L	1	5/24/2019 5:23:53 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 5:23:53 PM	44966
Benzyl alcohol	2.6	2.4	10	J	µg/L	1	5/24/2019 5:23:53 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 5:23:53 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:20:00 PM
Lab ID: 1905716-005
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/24/2019 5:23:53 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 5:23:53 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 5:23:53 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 5:23:53 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 5:23:53 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 5:23:53 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 5:23:53 PM	44966
2,4-Dimethylphenol	15	3.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 5:23:53 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 5:23:53 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Fluorene	3.1	2.9	10	J	µg/L	1	5/24/2019 5:23:53 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
1-Methylnaphthalene	11	3.1	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2-Methylnaphthalene	8.3	3.0	10	J	µg/L	1	5/24/2019 5:23:53 PM	44966
2-Methylphenol	40	2.9	10		µg/L	1	5/24/2019 5:23:53 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:20:00 PM
Lab ID: 1905716-005 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	46	3.6	10		µg/L	1	5/24/2019 5:23:53 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 5:23:53 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Naphthalene	32	4.1	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 5:23:53 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 5:23:53 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 5:23:53 PM	44966
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Phenol	24	8.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 5:23:53 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 5:23:53 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 5:23:53 PM	44966
Surr: 2-Fluorophenol	37.7	0	15-101		%Rec	1	5/24/2019 5:23:53 PM	44966
Surr: Phenol-d5	35.8	0	15-84.6		%Rec	1	5/24/2019 5:23:53 PM	44966
Surr: 2,4,6-Tribromophenol	69.4	0	27.8-112		%Rec	1	5/24/2019 5:23:53 PM	44966
Surr: Nitrobenzene-d5	69.0	0	33-113		%Rec	1	5/24/2019 5:23:53 PM	44966
Surr: 2-Fluorobiphenyl	53.3	0	26.6-107		%Rec	1	5/24/2019 5:23:53 PM	44966
Surr: 4-Terphenyl-d14	78.2	0	18.7-148		%Rec	1	5/24/2019 5:23:53 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	6100	83	500		µg/L	500	5/21/2019 8:50:55 AM	R60052
Toluene	3400	18	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Ethylbenzene	570	6.6	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Methyl tert-butyl ether (MTBE)	46	23	50	J	µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2,4-Trimethylbenzene	260	11	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,3,5-Trimethylbenzene	53	9.4	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2-Dichloroethane (EDC)	ND	9.7	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2-Dibromoethane (EDB)	ND	8.3	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Naphthalene	54	14	100	J	µg/L	50	5/21/2019 9:19:34 AM	R60052
1-Methylnaphthalene	17	16	200	J	µg/L	50	5/21/2019 9:19:34 AM	R60052
2-Methylnaphthalene	ND	17	200		µg/L	50	5/21/2019 9:19:34 AM	R60052
Acetone	ND	60	500		µg/L	50	5/21/2019 9:19:34 AM	R60052
Bromobenzene	ND	12	50		µg/L	50	5/21/2019 9:19:34 AM	R60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:20:00 PM
Lab ID: 1905716-005 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	6.7	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Bromoform	ND	14	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Bromomethane	ND	14	150		µg/L	50	5/21/2019 9:19:34 AM	R60052
2-Butanone	ND	100	500		µg/L	50	5/21/2019 9:19:34 AM	R60052
Carbon disulfide	ND	23	500		µg/L	50	5/21/2019 9:19:34 AM	R60052
Carbon Tetrachloride	ND	7.0	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Chlorobenzene	ND	9.7	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Chloroethane	ND	8.9	100		µg/L	50	5/21/2019 9:19:34 AM	R60052
Chloroform	ND	6.1	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Chloromethane	ND	16	150		µg/L	50	5/21/2019 9:19:34 AM	R60052
2-Chlorotoluene	ND	12	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
4-Chlorotoluene	ND	12	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
cis-1,2-DCE	ND	9.5	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
cis-1,3-Dichloropropene	ND	6.9	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2-Dibromo-3-chloropropane	ND	16	100		µg/L	50	5/21/2019 9:19:34 AM	R60052
Dibromochloromethane	ND	12	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Dibromomethane	ND	10	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2-Dichlorobenzene	ND	15	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,3-Dichlorobenzene	ND	12	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,4-Dichlorobenzene	ND	15	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Dichlorodifluoromethane	ND	13	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,1-Dichloroethane	55	7.0	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,1-Dichloroethene	ND	10	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2-Dichloropropane	ND	10	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,3-Dichloropropane	ND	10	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
2,2-Dichloropropane	ND	12	100		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,1-Dichloropropene	ND	8.1	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Hexachlorobutadiene	ND	15	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
2-Hexanone	ND	77	500		µg/L	50	5/21/2019 9:19:34 AM	R60052
Isopropylbenzene	19	9.6	50	J	µg/L	50	5/21/2019 9:19:34 AM	R60052
4-Isopropyltoluene	ND	11	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
4-Methyl-2-pentanone	ND	36	500		µg/L	50	5/21/2019 9:19:34 AM	R60052
Methylene Chloride	ND	7.7	150		µg/L	50	5/21/2019 9:19:34 AM	R60052
n-Butylbenzene	ND	11	150		µg/L	50	5/21/2019 9:19:34 AM	R60052
n-Propylbenzene	47	11	50	J	µg/L	50	5/21/2019 9:19:34 AM	R60052
sec-Butylbenzene	ND	12	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Styrene	ND	9.6	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
tert-Butylbenzene	ND	10	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,1,1,2-Tetrachloroethane	ND	10	50		µg/L	50	5/21/2019 9:19:34 AM	R60052

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:20:00 PM
Lab ID: 1905716-005 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	27	100		µg/L	50	5/21/2019 9:19:34 AM	R60052
Tetrachloroethene (PCE)	ND	7.5	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
trans-1,2-DCE	ND	9.0	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
trans-1,3-Dichloropropene	ND	8.3	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2,3-Trichlorobenzene	ND	15	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2,4-Trichlorobenzene	ND	9.8	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,1,1-Trichloroethane	ND	8.6	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,1,2-Trichloroethane	ND	11	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Trichloroethene (TCE)	ND	8.3	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
Trichlorofluoromethane	ND	9.5	50		µg/L	50	5/21/2019 9:19:34 AM	R60052
1,2,3-Trichloropropane	ND	15	100		µg/L	50	5/21/2019 9:19:34 AM	R60052
Vinyl chloride	44	9.0	50	J	µg/L	50	5/21/2019 9:19:34 AM	R60052
Xylenes, Total	1800	23	75		µg/L	50	5/21/2019 9:19:34 AM	R60052
Surr: 1,2-Dichloroethane-d4	86.0	0	70-130		%Rec	50	5/21/2019 9:19:34 AM	R60052
Surr: 4-Bromofluorobenzene	89.0	0	70-130		%Rec	50	5/21/2019 9:19:34 AM	R60052
Surr: Dibromofluoromethane	97.2	0	70-130		%Rec	50	5/21/2019 9:19:34 AM	R60052
Surr: Toluene-d8	86.8	0	70-130		%Rec	50	5/21/2019 9:19:34 AM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	28	1.5	2.5		mg/L	50	5/21/2019 9:19:34 AM	G60052
Surr: BFB	95.5	0	70-130		%Rec	50	5/21/2019 9:19:34 AM	G60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:40:00 PM
Lab ID: 1905716-006 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	3.5	0.35	1.0		mg/L	1	5/17/2019 5:18:22 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 5:18:22 PM	44962
Surr: DNOP	115	0	70-130		%Rec	1	5/17/2019 5:18:22 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.25	0.50		mg/L	5	5/15/2019 2:58:52 AM	R59859
Chloride	460	3.1	25		mg/L	50	5/22/2019 1:08:48 PM	R60098
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/15/2019 2:58:52 AM	R59859
Bromide	0.56	0.089	0.50		mg/L	5	5/15/2019 2:58:52 AM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/15/2019 2:58:52 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 2:58:52 AM	R59859
Sulfate	ND	0.27	2.5		mg/L	5	5/15/2019 2:58:52 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 9:04:07 PM	E60186
Barium	4.6	0.0032	0.010	*	mg/L	5	5/24/2019 9:06:11 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:04:07 PM	E60186
Boron	0.40	0.0045	0.040		mg/L	1	5/24/2019 9:04:07 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:04:07 PM	E60186
Calcium	160	0.31	5.0		mg/L	5	5/24/2019 9:06:11 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:04:07 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:04:07 PM	E60186
Copper	0.0026	0.0013	0.0060	J	mg/L	1	5/24/2019 9:04:07 PM	E60186
Iron	8.4	0.44	1.0	*	mg/L	50	5/24/2019 9:08:23 PM	E60186
Magnesium	36	0.050	1.0		mg/L	1	5/24/2019 9:04:07 PM	E60186
Manganese	3.4	0.0014	0.010	*	mg/L	5	5/24/2019 9:06:11 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:04:07 PM	E60186
Nickel	0.017	0.0040	0.010		mg/L	1	5/24/2019 9:04:07 PM	E60186
Potassium	0.46	0.16	1.0	J	mg/L	1	5/24/2019 9:04:07 PM	E60186
Silver	0.0026	0.00094	0.0050	J	mg/L	1	5/24/2019 9:04:07 PM	E60186
Sodium	290	2.1	5.0		mg/L	5	5/24/2019 9:06:11 PM	E60186
Zinc	0.13	0.0023	0.010		mg/L	1	5/24/2019 9:04:07 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.76	0.0025	0.020	*	mg/L	1	6/6/2019 2:07:45 PM	45402
Barium	4.9	0.0032	0.010	*	mg/L	5	5/30/2019 9:00:01 PM	45220
Beryllium	0.00031	0.00028	0.0020	J	mg/L	1	5/30/2019 8:57:59 PM	45220
Boron	0.40	0.0045	0.040		mg/L	1	5/30/2019 8:57:59 PM	45220
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 8:57:59 PM	45220
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 8:57:59 PM	45220
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 8:57:59 PM	45220

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H	Holding times for preparation or analysis exceeded
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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:40:00 PM
Lab ID: 1905716-006 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 8:57:59 PM	45220
Iron	8.9	0.087	0.20	*	mg/L	10	5/30/2019 9:02:13 PM	45220
Manganese	3.6	0.0014	0.010	*	mg/L	5	5/30/2019 9:00:01 PM	45220
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 8:57:59 PM	45220
Nickel	0.019	0.0040	0.010		mg/L	1	5/30/2019 8:57:59 PM	45220
Silver	0.0017	0.0014	0.0050	J	mg/L	1	5/30/2019 8:57:59 PM	45220
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 8:57:59 PM	45220
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:36:07 PM	D59904
Arsenic	0.0051	0.00050	0.0050		mg/L	5	5/15/2019 5:36:07 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:36:07 PM	D59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 5:36:07 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:36:07 PM	D59904
Uranium	ND	0.00037	0.0025		mg/L	5	5/15/2019 5:36:07 PM	D59904
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 5:21:25 PM	45220
Arsenic	0.0051	0.00031	0.0010		mg/L	1	5/29/2019 5:21:25 PM	45220
Lead	0.00045	0.000055	0.00050	J	mg/L	1	5/29/2019 5:21:25 PM	45220
Selenium	0.00063	0.00048	0.0010	J	mg/L	1	5/29/2019 5:21:25 PM	45220
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 5:21:25 PM	45220
Uranium	0.00011	0.000085	0.00050	J	mg/L	1	5/29/2019 5:21:25 PM	45220
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 1:33:18 PM	44957
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Acenaphthylene	ND	12	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Aniline	ND	18	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Anthracene	ND	13	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Azobenzene	ND	16	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Benz(a)anthracene	ND	18	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Benzo(a)pyrene	ND	18	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Benzoic acid	ND	54	100		µg/L	1	5/24/2019 5:53:53 PM	44966
Benzyl alcohol	ND	12	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/24/2019 5:53:53 PM	44966

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:40:00 PM
Lab ID: 1905716-006
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Bis(2-ethylhexyl)phthalate	ND	22	50		µg/L	1	5/24/2019 5:53:53 PM	44966
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Carbazole	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/24/2019 5:53:53 PM	44966
4-Chloroaniline	ND	11	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2-Chloronaphthalene	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2-Chlorophenol	ND	13	50		µg/L	1	5/24/2019 5:53:53 PM	44966
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Chrysene	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Dibenzofuran	ND	16	50		µg/L	1	5/24/2019 5:53:53 PM	44966
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/24/2019 5:53:53 PM	44966
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/24/2019 5:53:53 PM	44966
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/24/2019 5:53:53 PM	44966
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Diethyl phthalate	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Dimethyl phthalate	ND	16	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/24/2019 5:53:53 PM	44966
2,4-Dimethylphenol	17	15	50	J	µg/L	1	5/24/2019 5:53:53 PM	44966
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/24/2019 5:53:53 PM	44966
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/24/2019 5:53:53 PM	44966
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Fluoranthene	ND	12	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Fluorene	15	14	50	J	µg/L	1	5/24/2019 5:53:53 PM	44966
Hexachlorobenzene	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Hexachlorobutadiene	ND	24	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Hexachloroethane	ND	24	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Isophorone	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
1-Methylnaphthalene	68	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2-Methylnaphthalene	93	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2-Methylphenol	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:40:00 PM
Lab ID: 1905716-006
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	18	50		µg/L	1	5/24/2019 5:53:53 PM	44966
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/24/2019 5:53:53 PM	44966
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/24/2019 5:53:53 PM	44966
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Naphthalene	170	21	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2-Nitroaniline	ND	16	50		µg/L	1	5/24/2019 5:53:53 PM	44966
3-Nitroaniline	ND	16	50		µg/L	1	5/24/2019 5:53:53 PM	44966
4-Nitroaniline	ND	13	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Nitrobenzene	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2-Nitrophenol	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
4-Nitrophenol	ND	38	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Pentachlorophenol	ND	14	100		µg/L	1	5/24/2019 5:53:53 PM	44966
Phenanthrene	ND	14	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Phenol	ND	40	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Pyrene	ND	13	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Pyridine	ND	48	50		µg/L	1	5/24/2019 5:53:53 PM	44966
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/24/2019 5:53:53 PM	44966
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/24/2019 5:53:53 PM	44966
Surr: 2-Fluorophenol	43.3	0	15-101		%Rec	1	5/24/2019 5:53:53 PM	44966
Surr: Phenol-d5	45.1	0	15-84.6		%Rec	1	5/24/2019 5:53:53 PM	44966
Surr: 2,4,6-Tribromophenol	79.2	0	27.8-112		%Rec	1	5/24/2019 5:53:53 PM	44966
Surr: Nitrobenzene-d5	85.6	0	33-113		%Rec	1	5/24/2019 5:53:53 PM	44966
Surr: 2-Fluorobiphenyl	59.1	0	26.6-107		%Rec	1	5/24/2019 5:53:53 PM	44966
Surr: 4-Terphenyl-d14	79.7	0	18.7-148		%Rec	1	5/24/2019 5:53:53 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	5500	83	500		µg/L	500	5/21/2019 9:48:10 AM	R60052
Toluene	900	18	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Ethylbenzene	1700	6.6	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Methyl tert-butyl ether (MTBE)	24	23	50	J	µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2,4-Trimethylbenzene	830	11	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,3,5-Trimethylbenzene	220	9.4	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2-Dichloroethane (EDC)	ND	9.7	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2-Dibromoethane (EDB)	ND	8.3	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Naphthalene	200	14	100		µg/L	50	5/21/2019 10:16:51 AM	R60052
1-Methylnaphthalene	73	16	200	J	µg/L	50	5/21/2019 10:16:51 AM	R60052
2-Methylnaphthalene	88	17	200	J	µg/L	50	5/21/2019 10:16:51 AM	R60052
Acetone	ND	60	500		µg/L	50	5/21/2019 10:16:51 AM	R60052
Bromobenzene	ND	12	50		µg/L	50	5/21/2019 10:16:51 AM	R60052

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:40:00 PM
Lab ID: 1905716-006 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	6.7	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Bromoform	ND	14	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Bromomethane	ND	14	150		µg/L	50	5/21/2019 10:16:51 AM	R60052
2-Butanone	ND	100	500		µg/L	50	5/21/2019 10:16:51 AM	R60052
Carbon disulfide	ND	23	500		µg/L	50	5/21/2019 10:16:51 AM	R60052
Carbon Tetrachloride	ND	7.0	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Chlorobenzene	ND	9.7	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Chloroethane	ND	8.9	100		µg/L	50	5/21/2019 10:16:51 AM	R60052
Chloroform	ND	6.1	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Chloromethane	ND	16	150		µg/L	50	5/21/2019 10:16:51 AM	R60052
2-Chlorotoluene	ND	12	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
4-Chlorotoluene	ND	12	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
cis-1,2-DCE	ND	9.5	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
cis-1,3-Dichloropropene	ND	6.9	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2-Dibromo-3-chloropropane	ND	16	100		µg/L	50	5/21/2019 10:16:51 AM	R60052
Dibromochloromethane	ND	12	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Dibromomethane	ND	10	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2-Dichlorobenzene	ND	15	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,3-Dichlorobenzene	ND	12	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,4-Dichlorobenzene	ND	15	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Dichlorodifluoromethane	ND	13	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,1-Dichloroethane	27	7.0	50	J	µg/L	50	5/21/2019 10:16:51 AM	R60052
1,1-Dichloroethene	13	10	50	J	µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2-Dichloropropane	ND	10	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,3-Dichloropropane	ND	10	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
2,2-Dichloropropane	ND	12	100		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,1-Dichloropropene	ND	8.1	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Hexachlorobutadiene	ND	15	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
2-Hexanone	ND	77	500		µg/L	50	5/21/2019 10:16:51 AM	R60052
Isopropylbenzene	60	9.6	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
4-Isopropyltoluene	ND	11	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
4-Methyl-2-pentanone	ND	36	500		µg/L	50	5/21/2019 10:16:51 AM	R60052
Methylene Chloride	ND	7.7	150		µg/L	50	5/21/2019 10:16:51 AM	R60052
n-Butylbenzene	ND	11	150		µg/L	50	5/21/2019 10:16:51 AM	R60052
n-Propylbenzene	130	11	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
sec-Butylbenzene	ND	12	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Styrene	ND	9.6	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
tert-Butylbenzene	ND	10	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,1,1,2-Tetrachloroethane	ND	10	50		µg/L	50	5/21/2019 10:16:51 AM	R60052

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 2:40:00 PM
Lab ID: 1905716-006 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	27	100		µg/L	50	5/21/2019 10:16:51 AM	R60052
Tetrachloroethene (PCE)	ND	7.5	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
trans-1,2-DCE	ND	9.0	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
trans-1,3-Dichloropropene	ND	8.3	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2,3-Trichlorobenzene	ND	15	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2,4-Trichlorobenzene	ND	9.8	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,1,1-Trichloroethane	ND	8.6	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,1,2-Trichloroethane	ND	11	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Trichloroethene (TCE)	ND	8.3	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
Trichlorofluoromethane	ND	9.5	50		µg/L	50	5/21/2019 10:16:51 AM	R60052
1,2,3-Trichloropropane	ND	15	100		µg/L	50	5/21/2019 10:16:51 AM	R60052
Vinyl chloride	23	9.0	50	J	µg/L	50	5/21/2019 10:16:51 AM	R60052
Xylenes, Total	7900	23	75		µg/L	50	5/21/2019 10:16:51 AM	R60052
Surr: 1,2-Dichloroethane-d4	88.3	0	70-130		%Rec	50	5/21/2019 10:16:51 AM	R60052
Surr: 4-Bromofluorobenzene	89.8	0	70-130		%Rec	50	5/21/2019 10:16:51 AM	R60052
Surr: Dibromofluoromethane	97.1	0	70-130		%Rec	50	5/21/2019 10:16:51 AM	R60052
Surr: Toluene-d8	86.5	0	70-130		%Rec	50	5/21/2019 10:16:51 AM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	48	1.5	2.5		mg/L	50	5/21/2019 10:16:51 AM	G60052
Surr: BFB	95.7	0	70-130		%Rec	50	5/21/2019 10:16:51 AM	G60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-15
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 11:15:00 AM
Lab ID: 1905716-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	9.7	0.35	1.0		mg/L	1	5/17/2019 5:42:47 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 5:42:47 PM	44962
Surr: DNOP	114	0	70-130		%Rec	1	5/17/2019 5:42:47 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/15/2019 3:23:40 AM	R59859
Chloride	3900	31	250		mg/L	500	5/22/2019 1:21:13 PM	R60098
Nitrogen, Nitrite (As N)	ND	0.090	2.0		mg/L	20	5/15/2019 3:36:05 AM	R59859
Bromide	ND	0.36	2.0		mg/L	20	5/15/2019 3:36:05 AM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/15/2019 3:23:40 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 3:23:40 AM	R59859
Sulfate	0.44	0.27	2.5	J	mg/L	5	5/15/2019 3:23:40 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.045	0.0025	0.020		mg/L	1	5/24/2019 9:10:38 PM	E60186
Barium	17	0.032	0.10	*	mg/L	50	5/24/2019 9:21:24 PM	E60186
Beryllium	0.00033	0.00028	0.0020	J	mg/L	1	5/24/2019 9:10:38 PM	E60186
Boron	0.59	0.0045	0.040		mg/L	1	5/24/2019 9:10:38 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:10:38 PM	E60186
Calcium	670	3.1	50		mg/L	50	5/24/2019 9:21:24 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:10:38 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:10:38 PM	E60186
Copper	0.0031	0.0013	0.0060	J	mg/L	1	5/24/2019 9:10:38 PM	E60186
Iron	26	0.44	1.0	*	mg/L	50	5/24/2019 9:21:24 PM	E60186
Magnesium	180	0.25	5.0		mg/L	5	5/24/2019 9:12:45 PM	E60186
Manganese	8.2	0.014	0.10	*	mg/L	50	5/24/2019 9:21:24 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:10:38 PM	E60186
Nickel	0.017	0.0040	0.010		mg/L	1	5/24/2019 9:10:38 PM	E60186
Potassium	2.4	0.16	1.0		mg/L	1	5/24/2019 9:10:38 PM	E60186
Silver	0.0090	0.00094	0.0050		mg/L	1	5/24/2019 9:10:38 PM	E60186
Sodium	1600	21	50		mg/L	50	5/24/2019 9:21:24 PM	E60186
Zinc	0.046	0.0023	0.010		mg/L	1	5/24/2019 9:10:38 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.6	0.0050	0.040	*	mg/L	2	6/3/2019 3:07:12 PM	45220
Barium	19	0.032	0.10	*	mg/L	50	6/3/2019 3:17:46 PM	45220
Beryllium	0.00089	0.00028	0.0020	J	mg/L	1	5/30/2019 9:04:31 PM	45220
Boron	0.58	0.0045	0.040		mg/L	1	5/30/2019 9:04:31 PM	45220
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 9:04:31 PM	45220
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 9:04:31 PM	45220
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 9:04:31 PM	45220

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-15
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 11:15:00 AM
Lab ID: 1905716-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 9:04:31 PM	45220
Iron	31	0.44	1.0	*	mg/L	50	6/3/2019 3:17:46 PM	45220
Manganese	8.4	0.0029	0.020	*	mg/L	10	5/30/2019 9:08:40 PM	45220
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 9:04:31 PM	45220
Nickel	0.019	0.0040	0.010		mg/L	1	5/30/2019 9:04:31 PM	45220
Silver	0.0064	0.0014	0.0050		mg/L	1	5/30/2019 9:04:31 PM	45220
Zinc	0.016	0.0058	0.010		mg/L	1	5/30/2019 9:04:31 PM	45220
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:38:49 PM	D59904
Arsenic	0.0059	0.00050	0.0050		mg/L	5	5/15/2019 5:38:49 PM	D59904
Lead	0.00041	0.00027	0.0025	J	mg/L	5	5/15/2019 5:38:49 PM	D59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 5:38:49 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:38:49 PM	D59904
Uranium	ND	0.00037	0.0025		mg/L	5	5/15/2019 5:38:49 PM	D59904
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 5:28:00 PM	45220
Arsenic	0.0081	0.00031	0.0010		mg/L	1	5/29/2019 5:28:00 PM	45220
Lead	0.0058	0.000055	0.00050		mg/L	1	5/29/2019 5:28:00 PM	45220
Selenium	0.0014	0.00048	0.0010		mg/L	1	5/29/2019 5:28:00 PM	45220
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 5:28:00 PM	45220
Uranium	0.00058	0.000085	0.00050		mg/L	1	5/29/2019 5:28:00 PM	45220
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/16/2019 1:35:33 PM	44957
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Acenaphthylene	ND	12	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Aniline	ND	18	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Anthracene	ND	13	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Azobenzene	ND	16	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Benz(a)anthracene	ND	18	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Benzo(a)pyrene	ND	18	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Benzoic acid	ND	54	100		µg/L	1	5/24/2019 6:23:54 PM	44966
Benzyl alcohol	14	12	50	J	µg/L	1	5/24/2019 6:23:54 PM	44966
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/24/2019 6:23:54 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-15
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 11:15:00 AM
Lab ID: 1905716-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Bis(2-ethylhexyl)phthalate	ND	22	50		µg/L	1	5/24/2019 6:23:54 PM	44966
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Carbazole	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/24/2019 6:23:54 PM	44966
4-Chloroaniline	ND	11	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2-Chloronaphthalene	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2-Chlorophenol	ND	13	50		µg/L	1	5/24/2019 6:23:54 PM	44966
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Chrysene	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Di-n-octyl phthalate	ND	18	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Dibenzofuran	ND	16	50		µg/L	1	5/24/2019 6:23:54 PM	44966
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/24/2019 6:23:54 PM	44966
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/24/2019 6:23:54 PM	44966
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/24/2019 6:23:54 PM	44966
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Diethyl phthalate	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Dimethyl phthalate	ND	16	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/24/2019 6:23:54 PM	44966
2,4-Dimethylphenol	40	15	50	J	µg/L	1	5/24/2019 6:23:54 PM	44966
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/24/2019 6:23:54 PM	44966
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/24/2019 6:23:54 PM	44966
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Fluoranthene	ND	12	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Fluorene	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Hexachlorobenzene	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Hexachlorobutadiene	ND	24	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Hexachloroethane	ND	24	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Isophorone	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
1-Methylnaphthalene	16	15	50	J	µg/L	1	5/24/2019 6:23:54 PM	44966
2-Methylnaphthalene	16	15	50	J	µg/L	1	5/24/2019 6:23:54 PM	44966
2-Methylphenol	180	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-15
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 11:15:00 AM
Lab ID: 1905716-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	26	18	50	J	µg/L	1	5/24/2019 6:23:54 PM	44966
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/24/2019 6:23:54 PM	44966
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/24/2019 6:23:54 PM	44966
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Naphthalene	58	21	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2-Nitroaniline	ND	16	50		µg/L	1	5/24/2019 6:23:54 PM	44966
3-Nitroaniline	ND	16	50		µg/L	1	5/24/2019 6:23:54 PM	44966
4-Nitroaniline	ND	13	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Nitrobenzene	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2-Nitrophenol	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
4-Nitrophenol	ND	38	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Pentachlorophenol	ND	14	100		µg/L	1	5/24/2019 6:23:54 PM	44966
Phenanthrene	ND	14	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Phenol	67	40	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Pyrene	ND	13	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Pyridine	ND	48	50		µg/L	1	5/24/2019 6:23:54 PM	44966
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/24/2019 6:23:54 PM	44966
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/24/2019 6:23:54 PM	44966
Surr: 2-Fluorophenol	32.4	0	15-101		%Rec	1	5/24/2019 6:23:54 PM	44966
Surr: Phenol-d5	43.3	0	15-84.6		%Rec	1	5/24/2019 6:23:54 PM	44966
Surr: 2,4,6-Tribromophenol	37.4	0	27.8-112		%Rec	1	5/24/2019 6:23:54 PM	44966
Surr: Nitrobenzene-d5	89.4	0	33-113		%Rec	1	5/24/2019 6:23:54 PM	44966
Surr: 2-Fluorobiphenyl	65.6	0	26.6-107		%Rec	1	5/24/2019 6:23:54 PM	44966
Surr: 4-Terphenyl-d14	92.5	0	18.7-148		%Rec	1	5/24/2019 6:23:54 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	18000	83	500		µg/L	500	5/21/2019 12:11:54 PM	R60052
Toluene	4900	18	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Ethylbenzene	1800	6.6	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Methyl tert-butyl ether (MTBE)	68	23	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2,4-Trimethylbenzene	510	11	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,3,5-Trimethylbenzene	170	9.4	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2-Dichloroethane (EDC)	ND	9.7	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2-Dibromoethane (EDB)	ND	8.3	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Naphthalene	87	14	100	J	µg/L	50	5/21/2019 10:45:33 AM	R60052
1-Methylnaphthalene	24	16	200	J	µg/L	50	5/21/2019 10:45:33 AM	R60052
2-Methylnaphthalene	20	17	200	J	µg/L	50	5/21/2019 10:45:33 AM	R60052
Acetone	ND	60	500		µg/L	50	5/21/2019 10:45:33 AM	R60052
Bromobenzene	ND	12	50		µg/L	50	5/21/2019 10:45:33 AM	R60052

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-15
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 11:15:00 AM
Lab ID: 1905716-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	6.7	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Bromoform	ND	14	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Bromomethane	ND	14	150		µg/L	50	5/21/2019 10:45:33 AM	R60052
2-Butanone	ND	100	500		µg/L	50	5/21/2019 10:45:33 AM	R60052
Carbon disulfide	ND	23	500		µg/L	50	5/21/2019 10:45:33 AM	R60052
Carbon Tetrachloride	ND	7.0	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Chlorobenzene	ND	9.7	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Chloroethane	ND	8.9	100		µg/L	50	5/21/2019 10:45:33 AM	R60052
Chloroform	ND	6.1	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Chloromethane	ND	16	150		µg/L	50	5/21/2019 10:45:33 AM	R60052
2-Chlorotoluene	ND	12	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
4-Chlorotoluene	ND	12	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
cis-1,2-DCE	ND	9.5	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
cis-1,3-Dichloropropene	ND	6.9	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2-Dibromo-3-chloropropane	ND	16	100		µg/L	50	5/21/2019 10:45:33 AM	R60052
Dibromochloromethane	ND	12	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Dibromomethane	ND	10	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2-Dichlorobenzene	ND	15	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,3-Dichlorobenzene	ND	12	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,4-Dichlorobenzene	ND	15	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Dichlorodifluoromethane	ND	13	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,1-Dichloroethane	25	7.0	50	J	µg/L	50	5/21/2019 10:45:33 AM	R60052
1,1-Dichloroethene	ND	10	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2-Dichloropropane	ND	10	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,3-Dichloropropane	ND	10	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
2,2-Dichloropropane	ND	12	100		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,1-Dichloropropene	ND	8.1	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Hexachlorobutadiene	ND	15	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
2-Hexanone	ND	77	500		µg/L	50	5/21/2019 10:45:33 AM	R60052
Isopropylbenzene	110	9.6	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
4-Isopropyltoluene	ND	11	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
4-Methyl-2-pentanone	ND	36	500		µg/L	50	5/21/2019 10:45:33 AM	R60052
Methylene Chloride	ND	7.7	150		µg/L	50	5/21/2019 10:45:33 AM	R60052
n-Butylbenzene	ND	11	150		µg/L	50	5/21/2019 10:45:33 AM	R60052
n-Propylbenzene	140	11	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
sec-Butylbenzene	15	12	50	J	µg/L	50	5/21/2019 10:45:33 AM	R60052
Styrene	ND	9.6	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
tert-Butylbenzene	ND	10	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,1,1,2-Tetrachloroethane	ND	10	50		µg/L	50	5/21/2019 10:45:33 AM	R60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-15
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 11:15:00 AM
Lab ID: 1905716-007
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	27	100		µg/L	50	5/21/2019 10:45:33 AM	R60052
Tetrachloroethene (PCE)	ND	7.5	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
trans-1,2-DCE	ND	9.0	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
trans-1,3-Dichloropropene	ND	8.3	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2,3-Trichlorobenzene	ND	15	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2,4-Trichlorobenzene	ND	9.8	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,1,1-Trichloroethane	ND	8.6	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,1,2-Trichloroethane	ND	11	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Trichloroethene (TCE)	ND	8.3	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
Trichlorofluoromethane	ND	9.5	50		µg/L	50	5/21/2019 10:45:33 AM	R60052
1,2,3-Trichloropropane	ND	15	100		µg/L	50	5/21/2019 10:45:33 AM	R60052
Vinyl chloride	26	9.0	50	J	µg/L	50	5/21/2019 10:45:33 AM	R60052
Xylenes, Total	5800	23	75		µg/L	50	5/21/2019 10:45:33 AM	R60052
Surr: 1,2-Dichloroethane-d4	88.3	0	70-130		%Rec	50	5/21/2019 10:45:33 AM	R60052
Surr: 4-Bromofluorobenzene	87.7	0	70-130		%Rec	50	5/21/2019 10:45:33 AM	R60052
Surr: Dibromofluoromethane	94.8	0	70-130		%Rec	50	5/21/2019 10:45:33 AM	R60052
Surr: Toluene-d8	86.6	0	70-130		%Rec	50	5/21/2019 10:45:33 AM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	72	1.5	2.5		mg/L	50	5/21/2019 10:45:33 AM	G60052
Surr: BFB	96.7	0	70-130		%Rec	50	5/21/2019 10:45:33 AM	G60052

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:36:00 PM
Lab ID: 1905716-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	3.1	0.35	1.0		mg/L	1	5/17/2019 6:07:17 PM	44962
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/17/2019 6:07:17 PM	44962
Surr: DNOP	114	0	70-130		%Rec	1	5/17/2019 6:07:17 PM	44962
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.47	0.25	0.50	J	mg/L	5	5/15/2019 3:48:30 AM	R59859
Chloride	250	1.2	10		mg/L	20	5/15/2019 4:00:54 AM	R59859
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/15/2019 3:48:30 AM	R59859
Bromide	1.4	0.089	0.50		mg/L	5	5/15/2019 3:48:30 AM	R59859
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/15/2019 3:48:30 AM	R59859
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/15/2019 3:48:30 AM	R59859
Sulfate	8.1	0.27	2.5		mg/L	5	5/15/2019 3:48:30 AM	R59859
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.014	0.0025	0.020	J	mg/L	1	5/24/2019 9:23:43 PM	E60186
Barium	0.69	0.00065	0.0020		mg/L	1	5/24/2019 9:23:43 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:23:43 PM	E60186
Boron	0.33	0.0045	0.040		mg/L	1	5/24/2019 9:23:43 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:23:43 PM	E60186
Calcium	150	0.31	5.0		mg/L	5	5/24/2019 9:25:45 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:23:43 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:23:43 PM	E60186
Copper	0.0037	0.0013	0.0060	J	mg/L	1	5/24/2019 9:23:43 PM	E60186
Iron	3.2	0.044	0.10	*	mg/L	5	5/24/2019 9:25:45 PM	E60186
Magnesium	32	0.050	1.0		mg/L	1	5/24/2019 9:23:43 PM	E60186
Manganese	4.6	0.0014	0.010	*	mg/L	5	5/24/2019 9:25:45 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:23:43 PM	E60186
Nickel	0.0099	0.0040	0.010	J	mg/L	1	5/24/2019 9:23:43 PM	E60186
Potassium	0.49	0.16	1.0	J	mg/L	1	5/24/2019 9:23:43 PM	E60186
Silver	0.0025	0.00094	0.0050	J	mg/L	1	5/24/2019 9:23:43 PM	E60186
Sodium	260	2.1	5.0		mg/L	5	5/24/2019 9:25:45 PM	E60186
Zinc	0.059	0.0023	0.010		mg/L	1	5/24/2019 9:23:43 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	2.9	0.012	0.10	*	mg/L	5	6/6/2019 2:51:53 PM	45402
Barium	0.72	0.00065	0.0020		mg/L	1	5/30/2019 9:17:43 PM	45220
Beryllium	0.00047	0.00028	0.0020	J	mg/L	1	5/30/2019 9:17:43 PM	45220
Boron	0.32	0.0045	0.040		mg/L	1	5/30/2019 9:17:43 PM	45220
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 9:17:43 PM	45220
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 9:17:43 PM	45220
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 9:17:43 PM	45220

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:36:00 PM
Lab ID: 1905716-008 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 9:17:43 PM	45220
Iron	3.8	0.044	0.10	*	mg/L	5	5/30/2019 9:19:47 PM	45220
Manganese	4.8	0.0014	0.010	*	mg/L	5	5/30/2019 9:19:47 PM	45220
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 9:17:43 PM	45220
Nickel	0.010	0.0040	0.010		mg/L	1	5/30/2019 9:17:43 PM	45220
Silver	0.0022	0.0014	0.0050	J	mg/L	1	5/30/2019 9:17:43 PM	45220
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 9:17:43 PM	45220
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	5/15/2019 5:41:32 PM	D59904
Arsenic	0.0025	0.00050	0.0050	J	mg/L	5	5/15/2019 5:41:32 PM	D59904
Lead	ND	0.00027	0.0025		mg/L	5	5/15/2019 5:41:32 PM	D59904
Selenium	ND	0.00086	0.0050		mg/L	5	5/15/2019 5:41:32 PM	D59904
Thallium	ND	0.00024	0.0025		mg/L	5	5/15/2019 5:41:32 PM	D59904
Uranium	0.0017	0.00037	0.0025	J	mg/L	5	5/15/2019 5:41:32 PM	D59904
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 5:30:12 PM	45220
Arsenic	0.0025	0.00031	0.0010		mg/L	1	5/29/2019 5:30:12 PM	45220
Lead	0.0018	0.000055	0.00050		mg/L	1	5/29/2019 5:30:12 PM	45220
Selenium	0.00062	0.00048	0.0010	J	mg/L	1	5/29/2019 5:30:12 PM	45220
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 5:30:12 PM	45220
Uranium	0.0017	0.000085	0.00050		mg/L	1	5/29/2019 5:30:12 PM	45220
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000040	0.000038	0.00020	J	mg/L	1	5/16/2019 1:37:48 PM	44957
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	5.4	3.0	10	J	µg/L	1	5/24/2019 6:53:51 PM	44966
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Aniline	ND	3.6	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 6:53:51 PM	44966
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 6:53:51 PM	44966

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:36:00 PM
Lab ID: 1905716-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Bis(2-ethylhexyl)phthalate	5.1	4.3	10	J	µg/L	1	5/24/2019 6:53:51 PM	44966
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Carbazole	11	2.9	10		µg/L	1	5/24/2019 6:53:51 PM	44966
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 6:53:51 PM	44966
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 6:53:51 PM	44966
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 6:53:51 PM	44966
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 6:53:51 PM	44966
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 6:53:51 PM	44966
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 6:53:51 PM	44966
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 6:53:51 PM	44966
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Fluorene	8.9	2.9	10	J	µg/L	1	5/24/2019 6:53:51 PM	44966
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
1-Methylnaphthalene	73	3.1	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2-Methylnaphthalene	10	3.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 6:53:51 PM	44966

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:36:00 PM
Lab ID: 1905716-008 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 6:53:51 PM	44966
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 6:53:51 PM	44966
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Naphthalene	56	4.1	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 6:53:51 PM	44966
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 6:53:51 PM	44966
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 6:53:51 PM	44966
Phenanthrene	6.6	2.8	10	J	µg/L	1	5/24/2019 6:53:51 PM	44966
Phenol	13	8.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 6:53:51 PM	44966
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 6:53:51 PM	44966
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 6:53:51 PM	44966
Surr: 2-Fluorophenol	48.6	0	15-101		%Rec	1	5/24/2019 6:53:51 PM	44966
Surr: Phenol-d5	37.4	0	15-84.6		%Rec	1	5/24/2019 6:53:51 PM	44966
Surr: 2,4,6-Tribromophenol	66.4	0	27.8-112		%Rec	1	5/24/2019 6:53:51 PM	44966
Surr: Nitrobenzene-d5	74.4	0	33-113		%Rec	1	5/24/2019 6:53:51 PM	44966
Surr: 2-Fluorobiphenyl	58.7	0	26.6-107		%Rec	1	5/24/2019 6:53:51 PM	44966
Surr: 4-Terphenyl-d14	76.0	0	18.7-148		%Rec	1	5/24/2019 6:53:51 PM	44966
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3200	17	100		µg/L	100	5/21/2019 11:14:22 AM	R60052
Toluene	25	3.5	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Ethylbenzene	280	1.3	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Methyl tert-butyl ether (MTBE)	310	4.6	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2,4-Trimethylbenzene	120	2.1	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,3,5-Trimethylbenzene	2.1	1.9	10	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2-Dibromoethane (EDB)	ND	1.7	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Naphthalene	82	2.8	20		µg/L	10	5/21/2019 11:43:07 AM	R60052
1-Methylnaphthalene	120	3.1	40		µg/L	10	5/21/2019 11:43:07 AM	R60052
2-Methylnaphthalene	16	3.5	40	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
Acetone	ND	12	100		µg/L	10	5/21/2019 11:43:07 AM	R60052
Bromobenzene	ND	2.4	10		µg/L	10	5/21/2019 11:43:07 AM	R60052

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:36:00 PM
Lab ID: 1905716-008
Matrix: AQUEOUS
Received Date: 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	1.3	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Bromoform	ND	2.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Bromomethane	ND	2.7	30		µg/L	10	5/21/2019 11:43:07 AM	R60052
2-Butanone	ND	21	100		µg/L	10	5/21/2019 11:43:07 AM	R60052
Carbon disulfide	ND	4.5	100		µg/L	10	5/21/2019 11:43:07 AM	R60052
Carbon Tetrachloride	ND	1.4	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Chlorobenzene	ND	1.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Chloroethane	ND	1.8	20		µg/L	10	5/21/2019 11:43:07 AM	R60052
Chloroform	ND	1.2	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Chloromethane	ND	3.2	30		µg/L	10	5/21/2019 11:43:07 AM	R60052
2-Chlorotoluene	ND	2.5	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
4-Chlorotoluene	ND	2.3	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
cis-1,2-DCE	ND	1.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
cis-1,3-Dichloropropene	ND	1.4	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2-Dibromo-3-chloropropane	ND	3.3	20		µg/L	10	5/21/2019 11:43:07 AM	R60052
Dibromochloromethane	ND	2.4	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Dibromomethane	ND	2.1	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2-Dichlorobenzene	ND	3.0	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,3-Dichlorobenzene	ND	2.5	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,1-Dichloroethane	6.8	1.4	10	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
1,1-Dichloroethene	6.3	2.1	10	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2-Dichloropropane	ND	2.1	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,3-Dichloropropane	ND	2.0	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
2,2-Dichloropropane	ND	2.3	20		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,1-Dichloropropene	ND	1.6	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Hexachlorobutadiene	ND	3.1	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
2-Hexanone	ND	15	100		µg/L	10	5/21/2019 11:43:07 AM	R60052
Isopropylbenzene	21	1.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
4-Isopropyltoluene	2.4	2.2	10	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/21/2019 11:43:07 AM	R60052
Methylene Chloride	ND	1.5	30		µg/L	10	5/21/2019 11:43:07 AM	R60052
n-Butylbenzene	8.1	2.3	30	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
n-Propylbenzene	47	2.1	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
sec-Butylbenzene	4.7	2.5	10	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
Styrene	ND	1.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
tert-Butylbenzene	ND	2.1	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,1,1,2-Tetrachloroethane	ND	2.1	10		µg/L	10	5/21/2019 11:43:07 AM	R60052

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CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2019 2ND QTR MKTF WELLS
Collection Date: 5/13/2019 1:36:00 PM
Lab ID: 1905716-008 **Matrix:** AQUEOUS **Received Date:** 5/14/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	5.5	20		µg/L	10	5/21/2019 11:43:07 AM	R60052
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
trans-1,3-Dichloropropene	ND	1.7	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2,3-Trichlorobenzene	ND	3.0	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2,4-Trichlorobenzene	ND	2.0	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,1,1-Trichloroethane	5.9	1.7	10	J	µg/L	10	5/21/2019 11:43:07 AM	R60052
1,1,2-Trichloroethane	ND	2.2	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Trichloroethene (TCE)	ND	1.7	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Trichlorofluoromethane	ND	1.9	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
1,2,3-Trichloropropane	ND	3.0	20		µg/L	10	5/21/2019 11:43:07 AM	R60052
Vinyl chloride	ND	1.8	10		µg/L	10	5/21/2019 11:43:07 AM	R60052
Xylenes, Total	95	4.5	15		µg/L	10	5/21/2019 11:43:07 AM	R60052
Surr: 1,2-Dichloroethane-d4	87.8	0	70-130		%Rec	10	5/21/2019 11:43:07 AM	R60052
Surr: 4-Bromofluorobenzene	92.8	0	70-130		%Rec	10	5/21/2019 11:43:07 AM	R60052
Surr: Dibromofluoromethane	95.1	0	70-130		%Rec	10	5/21/2019 11:43:07 AM	R60052
Surr: Toluene-d8	84.5	0	70-130		%Rec	10	5/21/2019 11:43:07 AM	R60052
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	8.4	0.31	0.50		mg/L	10	5/21/2019 11:43:07 AM	G60052
Surr: BFB	96.2	0	70-130		%Rec	10	5/21/2019 11:43:07 AM	G60052

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB-45220**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45220**	RunNo: **60262**
Prep Date: **5/28/2019**	Analysis Date: **5/29/2019**	SeqNo: **2036575** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.00086	0.0020								J
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	0.0011	0.0020								J
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	0.012	0.020								J
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Zinc	ND	0.010								

Sample ID: **LLLCS-45220**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **45220**	RunNo: **60262**
Prep Date: **5/28/2019**	Analysis Date: **5/29/2019**	SeqNo: **2036577** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.9	50	150			J
Beryllium	0.0022	0.0020	0.002000	0	108	50	150			
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0026	0.0020	0.002000	0	130	50	150			
Chromium	0.0067	0.0060	0.006000	0	111	50	150			
Cobalt	0.0049	0.0060	0.006000	0	81.8	50	150			J
Copper	0.0038	0.0060	0.006000	0	63.2	50	150			J
Manganese	0.0026	0.0020	0.002000	0	131	50	150			
Molybdenum	0.0051	0.0080	0.008000	0	64.3	50	150			J
Nickel	0.0025	0.010	0.005000	0	50.4	50	150			J
Zinc	0.013	0.010	0.01000	0	134	50	150			

Sample ID: **LCS-45220**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45220**	RunNo: **60262**
Prep Date: **5/28/2019**	Analysis Date: **5/29/2019**	SeqNo: **2036579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.5	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.3	85	115			
Boron	0.48	0.040	0.5000	0	95.5	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF WELLS

Sample ID: **LCS-45220** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **45220** RunNo: **60262**

Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.49	0.0060	0.5000	0	97.9	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.50	0.010	0.5000	0	99.3	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Sample ID: **MB-45220** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **45220** RunNo: **60262**

Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036585** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID: **LLLCS-45220** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **45220** RunNo: **60262**

Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036587** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.027	0.020	0.02000	0	136	50	150			
Silver	0.0050	0.0050	0.005000	0	101	50	150			

Sample ID: **MB-45402** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **45402** RunNo: **60447**

Prep Date: **6/5/2019** Analysis Date: **6/6/2019** SeqNo: **2044629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LLLCS-45402** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **45402** RunNo: **60447**

Prep Date: **6/5/2019** Analysis Date: **6/6/2019** SeqNo: **2044630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	100	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **LCS-45402** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45402** RunNo: **60447**
Prep Date: **6/5/2019** Analysis Date: **6/6/2019** SeqNo: **2044631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB-E**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0035	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	117	50	150			J
Barium	0.0016	0.0020	0.002000	0	80.4	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	95.4	50	150			J
Boron	0.039	0.040	0.04000	0	97.9	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	107	50	150			
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.6	50	150			J
Cobalt	0.0057	0.0060	0.006000	0	94.3	50	150			J
Copper	0.0051	0.0060	0.006000	0	85.0	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0051	0.010	0.005000	0	102	50	150			J
Potassium	0.51	1.0	0.5000	0	103	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0052	0.0050	0.005000	0	104	50	150			
Sodium	0.61	1.0	0.5000	0	121	50	150			J
Zinc	0.0046	0.010	0.005000	0	91.7	50	150			J

Sample ID: **LCS-E**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			
Barium	0.48	0.0020	0.5000	0	95.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.1	85	115			
Boron	0.49	0.040	0.5000	0	98.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.3	85	115			
Iron	0.48	0.020	0.5000	0	96.9	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.4	85	115			
Nickel	0.47	0.010	0.5000	0	94.2	85	115			
Potassium	50	1.0	50.00	0	99.5	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB-45220** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45220** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036380** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45220** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45220** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036382** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	105	50	150			
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.0010	0.0010	0.001000	0	105	50	150			
Thallium	0.00046	0.00050	0.0005000	0	92.3	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.1	50	150			J

Sample ID: **MSLCS-45220** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45220** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036384** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	102	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	98.4	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Thallium	0.012	0.00050	0.01250	0	97.4	85	115			
Uranium	0.012	0.00050	0.01250	0	94.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D59904**	RunNo: **59904**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D59904**	RunNo: **59904**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00086	0.0010	0.001000	0	85.9	50	150			J
Arsenic	0.00097	0.0010	0.001000	0	96.7	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.2	50	150			J
Selenium	0.00057	0.0010	0.001000	0	56.8	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	91.1	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D59904**	RunNo: **59904**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021322** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.5	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	94.2	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Thallium	0.012	0.00050	0.01250	0	95.7	85	115			
Uranium	0.012	0.00050	0.01250	0	94.3	85	115			

Sample ID: **1905716-003FMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-4**	Batch ID: **D59904**	RunNo: **59904**
Prep Date:	Analysis Date: **5/15/2019**	SeqNo: **2021339** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.12	0.0050	0.1250	0	93.7	70	130			
Arsenic	0.13	0.0050	0.1250	0.008089	97.7	70	130			
Lead	0.058	0.0025	0.06250	0	92.6	70	130			
Selenium	0.13	0.0050	0.1250	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **1905716-003FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-4** Batch ID: **D59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021339** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.057	0.0025	0.06250	0	91.2	70	130			
Uranium	0.061	0.0025	0.06250	0.001758	95.0	70	130			

Sample ID: **1905716-003FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-4** Batch ID: **D59904** RunNo: **59904**
Prep Date: Analysis Date: **5/15/2019** SeqNo: **2021340** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.12	0.0050	0.1250	0	95.8	70	130	2.16	20	
Arsenic	0.13	0.0050	0.1250	0.008089	98.0	70	130	0.288	20	
Lead	0.058	0.0025	0.06250	0	92.1	70	130	0.564	20	
Selenium	0.12	0.0050	0.1250	0	98.3	70	130	4.65	20	
Thallium	0.057	0.0025	0.06250	0	91.4	70	130	0.195	20	
Uranium	0.061	0.0025	0.06250	0.001758	95.5	70	130	0.460	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB-44957**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **44957**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022545** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-44957**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **44957**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.4	80	120			

Sample ID: **1905716-003GMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-4**	Batch ID: **44957**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022548** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	75	125			

Sample ID: **1905716-003GMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-4**	Batch ID: **44957**	RunNo: **59942**
Prep Date: **5/15/2019**	Analysis Date: **5/16/2019**	SeqNo: **2022549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	75	125	0.917	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R59859**	RunNo: **59859**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020028** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59859**	RunNo: **59859**
Prep Date:	Analysis Date: **5/14/2019**	SeqNo: **2020029** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	110	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.2	90	110			
Bromide	2.4	0.10	2.500	0	96.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			
Sulfate	9.8	0.50	10.00	0	98.1	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R60098**	RunNo: **60098**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2029834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R60098**	RunNo: **60098**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2029835** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB-45060**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **45060**	RunNo: **60072**
Prep Date: **5/21/2019**	Analysis Date: **5/21/2019**	SeqNo: **2028596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-45060**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **45060**	RunNo: **60072**
Prep Date: **5/21/2019**	Analysis Date: **5/21/2019**	SeqNo: **2028598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.096	0.010	0.1000	0	96.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **MB-44962**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **44962**	RunNo: **59950**
Prep Date: **5/16/2019**	Analysis Date: **5/17/2019**	SeqNo: **2023552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	70	130			

Sample ID: **LCS-44962**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **44962**	RunNo: **59950**
Prep Date: **5/16/2019**	Analysis Date: **5/17/2019**	SeqNo: **2023553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.7	71.8	135			
Surr: DNOP	0.47		0.5000		93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R60052** RunNo: **60052**
Prep Date: Analysis Date: **5/20/2019** SeqNo: **2027944** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.5	70	130			
Toluene	18	1.0	20.00	0	92.1	70	130			
Chlorobenzene	18	1.0	20.00	0	92.1	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.0	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.1	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.6	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	8.5		10.00		84.6	70	130			

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R60052** RunNo: **60052**
Prep Date: Analysis Date: **5/20/2019** SeqNo: **2027976** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60052**	RunNo: **60052**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2027976** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60052**	RunNo: **60052**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2027976** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.8	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.2	70	130			
Surr: Toluene-d8	8.8		10.00		87.7	70	130			

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **mb-44966** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44966** RunNo: **60135**
Prep Date: **5/16/2019** Analysis Date: **5/23/2019** SeqNo: **2031051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR MKTF WELLS

Sample ID: **mb-44966** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **44966** RunNo: **60135**
Prep Date: **5/16/2019** Analysis Date: **5/23/2019** SeqNo: **2031051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		71.5	15	101			
Surr: Phenol-d5	110		200.0		55.7	15	84.6			
Surr: 2,4,6-Tribromophenol	180		200.0		89.8	27.8	112			
Surr: Nitrobenzene-d5	92		100.0		91.6	33	113			
Surr: 2-Fluorobiphenyl	69		100.0		69.2	26.6	107			
Surr: 4-Terphenyl-d14	92		100.0		91.7	18.7	148			

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF WELLS

Sample ID: **lcs-44966**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **44966**	RunNo: **60135**
Prep Date: **5/16/2019**	Analysis Date: **5/23/2019**	SeqNo: **2031052** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	69	10	100.0	0	68.8	32.2	94			
4-Chloro-3-methylphenol	180	10	200.0	0	90.7	37.7	101			
2-Chlorophenol	160	10	200.0	0	78.5	32.6	90.1			
1,4-Dichlorobenzene	48	10	100.0	0	48.4	30	87.2			
2,4-Dinitrotoluene	73	10	100.0	0	72.8	35.9	85.8			
N-Nitrosodi-n-propylamine	82	10	100.0	0	82.1	37.1	108			
4-Nitrophenol	94	10	200.0	0	47.2	22.4	86.6			
Pentachlorophenol	130	20	200.0	0	65.6	31.6	91			
Phenol	99	10	200.0	0	49.7	21.7	84.9			
Pyrene	70	10	100.0	0	70.3	46.3	103			
1,2,4-Trichlorobenzene	55	10	100.0	0	55.4	30.2	88.3			
Surr: 2-Fluorophenol	120		200.0		60.6	15	101			
Surr: Phenol-d5	96		200.0		48.1	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		77.4	27.8	112			
Surr: Nitrobenzene-d5	76		100.0		76.1	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	26.6	107			
Surr: 4-Terphenyl-d14	82		100.0		81.7	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905716**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR MKTF WELLS

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G60052**	RunNo: **60052**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2028002** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	70	130			
Surr: BFB	9.6		10.00		96.2	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60052**	RunNo: **60052**
Prep Date:	Analysis Date: **5/20/2019**	SeqNo: **2028003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.7		10.00		97.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905716** RcptNo: 1

Received By: **Isaiah Ortiz** **5/14/2019 4:50:00 PM** I-OK

Completed By: **Leah Baca** **5/14/2019 4:14:52 PM** Leah Baca

Reviewed By: YG 5/14/19 / ENM 5/15/19

Labeled by (unpres.) ENM 5/14/19 / DAD 5/15/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 18 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? no
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JC 5-15-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.32	Good	Yes			
2	2.37	Good	Yes			
3	3.47	Good	Yes			
4	4.16	Good	Yes			

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Albuquerque, NM 87109
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Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905716** RcptNo: **1**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
5	5.05	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush

Project Name:
2019 2ND QTR - MKTF WELLS

Project #:
MKTF 4, 9, 10, 11, 15

Project Manager:
BRIAN MOORE

Sampler: CAJOHNSON1@MARATHONPETROLEUM.COM

On Ice: X Yes ☐ No

Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905716	8260+MTBE	8015D(DRO/MRO/GRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	MAJOR CATIONS/ANIONS		METHOD 8011 - EDB	CYANIDE							Air Bubbles (Y or N)
5/13/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-001	X															
5/13/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	HCL	-002	X															
5/13/2019	1355	AQUEOUS	MKTF-4	MISC	MISC	-003	X	X	X	X	X	X		X								
5/13/2019	1406	AQUEOUS	DUPLICATE	MISC	MISC	-004	X	X	X	X	X	X		X								
5/13/2019	1420	AQUEOUS	MKTF-11	MISC	MISC	-005	X	X	2	X	X	X										
5/13/2019	1440	AQUEOUS	MKTF-10	MISC	MISC	-006	X	X	X	X	X	X										
5/13/2019	1115	AQUEOUS	MKTF-15	MISC	MISC	-007	X	X	X	X	X	X										
5/13/2019	1336	AQUEOUS	MKTF-9	MISC	MISC	-008	X	X	X	X	X	X										

Date	Time	Relinquished by:	Received by:	Date	Time
5/14/19	1330			5/14/19	1345
5/14/19	1650		CDO	5/14/19	1650

Remarks: 1. 3.2°C 2. 3.7°C 3. 4.7°C 4. 1.6°C 5. 0.5°C

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 05, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 2nd QTR GW Samples OrderNo.: 1905865

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/16/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 7:00:00 AM
Lab ID: 1905865-001 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Naphthalene	ND	0.28	2.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Acetone	ND	1.2	10		µg/L	1	5/22/2019 6:13:45 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 6:13:45 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 6:13:45 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Chloroform	ND	0.12	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 6:13:45 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 7:00:00 AM
Lab ID: 1905865-001 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 6:13:45 PM	R60108
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 6:13:45 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 6:13:45 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 6:13:45 PM	R60108
Surr: 1,2-Dichloroethane-d4	85.9	0	70-130		%Rec	1	5/22/2019 6:13:45 PM	R60108
Surr: 4-Bromofluorobenzene	92.0	0	70-130		%Rec	1	5/22/2019 6:13:45 PM	R60108
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	1	5/22/2019 6:13:45 PM	R60108
Surr: Toluene-d8	87.0	0	70-130		%Rec	1	5/22/2019 6:13:45 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 7:00:00 AM
Lab ID: 1905865-002
Matrix: TRIP BLANK
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Naphthalene	ND	0.28	2.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Acetone	5.6	1.2	10	J	µg/L	1	5/22/2019 6:42:26 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 6:42:26 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 6:42:26 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Chloroform	ND	0.12	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 6:42:26 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 7:00:00 AM
Lab ID: 1905865-002
Matrix: TRIP BLANK
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 6:42:26 PM	R60108
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 6:42:26 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 6:42:26 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 6:42:26 PM	R60108
Surr: 1,2-Dichloroethane-d4	85.7	0	70-130		%Rec	1	5/22/2019 6:42:26 PM	R60108
Surr: 4-Bromofluorobenzene	88.9	0	70-130		%Rec	1	5/22/2019 6:42:26 PM	R60108
Surr: Dibromofluoromethane	99.9	0	70-130		%Rec	1	5/22/2019 6:42:26 PM	R60108
Surr: Toluene-d8	85.6	0	70-130		%Rec	1	5/22/2019 6:42:26 PM	R60108

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-64
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 1:25:00 PM
Lab ID: 1905865-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.72	0.35	1.0	J	mg/L	1	5/21/2019 2:20:37 AM	45003
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2019 2:20:37 AM	45003
Surr: DNOP	88.4	0	70-130		%Rec	1	5/21/2019 2:20:37 AM	45003
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	4.3	0.25	0.50	*	mg/L	5	5/28/2019 11:15:05 AM	R60220
Chloride	55	0.31	2.5		mg/L	5	5/16/2019 7:35:15 PM	R59923
Nitrogen, Nitrite (As N)	0.89	0.022	0.50		mg/L	5	5/16/2019 7:35:15 PM	R59923
Bromide	1.3	0.089	0.50		mg/L	5	5/16/2019 7:35:15 PM	R59923
Nitrogen, Nitrate (As N)	0.42	0.027	0.50	J	mg/L	5	5/16/2019 7:35:15 PM	R59923
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/16/2019 7:35:15 PM	R59923
Sulfate	110	0.27	2.5		mg/L	5	5/16/2019 7:35:15 PM	R59923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.17	0.0025	0.020		mg/L	1	5/24/2019 9:28:09 PM	E60186
Barium	0.34	0.00065	0.0020		mg/L	1	5/24/2019 9:28:09 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:28:09 PM	E60186
Boron	1.4	0.045	0.40		mg/L	10	5/24/2019 9:30:19 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:28:09 PM	E60186
Calcium	17	0.062	1.0		mg/L	1	5/24/2019 9:28:09 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:28:09 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:28:09 PM	E60186
Copper	0.0054	0.0013	0.0060	J	mg/L	1	5/24/2019 9:28:09 PM	E60186
Iron	0.11	0.0087	0.020		mg/L	1	5/24/2019 9:28:09 PM	E60186
Magnesium	4.5	0.050	1.0		mg/L	1	5/24/2019 9:28:09 PM	E60186
Manganese	0.48	0.00029	0.0020	*	mg/L	1	5/24/2019 9:28:09 PM	E60186
Molybdenum	0.030	0.0067	0.0080		mg/L	1	5/24/2019 9:28:09 PM	E60186
Nickel	0.0048	0.0040	0.010	J	mg/L	1	5/24/2019 9:28:09 PM	E60186
Potassium	1.2	0.16	1.0		mg/L	1	5/24/2019 9:28:09 PM	E60186
Silver	ND	0.00094	0.0050		mg/L	1	5/24/2019 9:28:09 PM	E60186
Sodium	480	4.2	10		mg/L	10	5/24/2019 9:30:19 PM	E60186
Zinc	0.027	0.0023	0.010		mg/L	1	5/24/2019 9:28:09 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.97	0.012	0.10	*	mg/L	5	5/30/2019 10:30:09 PM	45221
Barium	0.35	0.00065	0.0020		mg/L	1	5/30/2019 10:27:55 PM	45221
Beryllium	ND	0.00028	0.0020		mg/L	1	5/30/2019 10:27:55 PM	45221
Boron	1.4	0.023	0.20		mg/L	5	5/30/2019 10:30:09 PM	45221
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 10:27:55 PM	45221
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 10:27:55 PM	45221
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 10:27:55 PM	45221

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-64
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 1:25:00 PM
Lab ID: 1905865-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 10:27:55 PM	45221
Iron	0.44	0.0087	0.020	*	mg/L	1	5/30/2019 10:27:55 PM	45221
Manganese	0.53	0.00029	0.0020	*	mg/L	1	5/30/2019 10:27:55 PM	45221
Molybdenum	0.034	0.0067	0.0080		mg/L	1	5/30/2019 10:27:55 PM	45221
Nickel	0.0040	0.0040	0.010	J	mg/L	1	5/30/2019 10:27:55 PM	45221
Silver	ND	0.0014	0.0050		mg/L	1	5/30/2019 10:27:55 PM	45221
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 10:27:55 PM	45221
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 9:05:08 PM	B60214
Arsenic	0.0041	0.00010	0.0010		mg/L	1	5/24/2019 12:25:24 AM	D60134
Lead	0.00026	0.000055	0.00050	J	mg/L	1	5/24/2019 12:25:24 AM	D60134
Selenium	0.00035	0.00017	0.0010	J	mg/L	1	5/24/2019 12:25:24 AM	D60134
Thallium	ND	0.000048	0.00050		mg/L	1	5/24/2019 12:25:24 AM	D60134
Uranium	0.016	0.000075	0.00050		mg/L	1	5/24/2019 12:25:24 AM	D60134
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 6:03:05 PM	45221
Arsenic	0.0040	0.00031	0.0010		mg/L	1	5/29/2019 6:03:05 PM	45221
Lead	0.0010	0.000055	0.00050		mg/L	1	5/29/2019 6:03:05 PM	45221
Selenium	0.00078	0.00048	0.0010	J	mg/L	1	5/29/2019 6:03:05 PM	45221
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 6:03:05 PM	45221
Uranium	0.016	0.000085	0.00050		mg/L	1	5/29/2019 6:03:05 PM	45221
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/24/2019 11:11:24 AM	45169
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Aniline	ND	3.6	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 7:23:49 PM	45061
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 7:23:49 PM	45061

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-64
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 1:25:00 PM
Lab ID: 1905865-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Bis(2-ethylhexyl)phthalate	4.3	4.3	10	J	µg/L	1	5/24/2019 7:23:49 PM	45061
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 7:23:49 PM	45061
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 7:23:49 PM	45061
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 7:23:49 PM	45061
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 7:23:49 PM	45061
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 7:23:49 PM	45061
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 7:23:49 PM	45061
2,4-Dimethylphenol	9.4	3.0	10	J	µg/L	1	5/24/2019 7:23:49 PM	45061
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 7:23:49 PM	45061
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 7:23:49 PM	45061
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Fluorene	ND	2.9	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
1-Methylnaphthalene	4.6	3.1	10	J	µg/L	1	5/24/2019 7:23:49 PM	45061
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 7:23:49 PM	45061

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-64
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 1:25:00 PM
Lab ID: 1905865-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 7:23:49 PM	45061
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 7:23:49 PM	45061
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Naphthalene	5.3	4.1	10	J	µg/L	1	5/24/2019 7:23:49 PM	45061
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 7:23:49 PM	45061
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 7:23:49 PM	45061
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 7:23:49 PM	45061
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Phenol	ND	8.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 7:23:49 PM	45061
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 7:23:49 PM	45061
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 7:23:49 PM	45061
Surr: 2-Fluorophenol	70.9	0	15-101		%Rec	1	5/24/2019 7:23:49 PM	45061
Surr: Phenol-d5	57.9	0	15-84.6		%Rec	1	5/24/2019 7:23:49 PM	45061
Surr: 2,4,6-Tribromophenol	107	0	27.8-112		%Rec	1	5/24/2019 7:23:49 PM	45061
Surr: Nitrobenzene-d5	116	0	33-113	S	%Rec	1	5/24/2019 7:23:49 PM	45061
Surr: 2-Fluorobiphenyl	105	0	26.6-107		%Rec	1	5/24/2019 7:23:49 PM	45061
Surr: 4-Terphenyl-d14	98.9	0	18.7-148		%Rec	1	5/24/2019 7:23:49 PM	45061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	68	0.83	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Toluene	11	1.8	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Ethylbenzene	190	0.66	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Methyl tert-butyl ether (MTBE)	ND	2.3	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2,4-Trimethylbenzene	190	1.1	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,3,5-Trimethylbenzene	23	0.94	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Naphthalene	9.3	1.4	10	J	µg/L	5	5/22/2019 7:11:08 PM	R60108
1-Methylnaphthalene	4.9	1.6	20	J	µg/L	5	5/22/2019 7:11:08 PM	R60108
2-Methylnaphthalene	3.0	1.7	20	J	µg/L	5	5/22/2019 7:11:08 PM	R60108
Acetone	ND	6.0	50		µg/L	5	5/22/2019 7:11:08 PM	R60108
Bromobenzene	ND	1.2	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-64
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 1:25:00 PM
Lab ID: 1905865-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	0.67	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Bromoform	ND	1.4	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Bromomethane	ND	1.4	15		µg/L	5	5/22/2019 7:11:08 PM	R60108
2-Butanone	ND	10	50		µg/L	5	5/22/2019 7:11:08 PM	R60108
Carbon disulfide	ND	2.3	50		µg/L	5	5/22/2019 7:11:08 PM	R60108
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Chlorobenzene	ND	0.97	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Chloroethane	ND	0.89	10		µg/L	5	5/22/2019 7:11:08 PM	R60108
Chloroform	ND	0.61	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Chloromethane	ND	1.6	15		µg/L	5	5/22/2019 7:11:08 PM	R60108
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	5/22/2019 7:11:08 PM	R60108
Dibromochloromethane	ND	1.2	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Dibromomethane	ND	1.0	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
2,2-Dichloropropane	ND	1.2	10		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
2-Hexanone	ND	7.7	50		µg/L	5	5/22/2019 7:11:08 PM	R60108
Isopropylbenzene	72	0.96	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
4-Isopropyltoluene	9.5	1.1	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	5/22/2019 7:11:08 PM	R60108
Methylene Chloride	ND	0.77	15		µg/L	5	5/22/2019 7:11:08 PM	R60108
n-Butylbenzene	ND	1.1	15		µg/L	5	5/22/2019 7:11:08 PM	R60108
n-Propylbenzene	63	1.1	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
sec-Butylbenzene	19	1.2	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Styrene	ND	0.96	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-64
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 1:25:00 PM
Lab ID: 1905865-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	5/22/2019 7:11:08 PM	R60108
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	5/22/2019 7:11:08 PM	R60108
Vinyl chloride	ND	0.90	5.0		µg/L	5	5/22/2019 7:11:08 PM	R60108
Xylenes, Total	440	2.3	7.5		µg/L	5	5/22/2019 7:11:08 PM	R60108
Surr: 1,2-Dichloroethane-d4	90.0	0	70-130		%Rec	5	5/22/2019 7:11:08 PM	R60108
Surr: 4-Bromofluorobenzene	92.7	0	70-130		%Rec	5	5/22/2019 7:11:08 PM	R60108
Surr: Dibromofluoromethane	104	0	70-130		%Rec	5	5/22/2019 7:11:08 PM	R60108
Surr: Toluene-d8	86.8	0	70-130		%Rec	5	5/22/2019 7:11:08 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	5.7	0.15	0.25		mg/L	5	5/22/2019 7:11:08 PM	G60108
Surr: BFB	97.7	0	70-130		%Rec	5	5/22/2019 7:11:08 PM	G60108

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 11:40:00 AM
Lab ID: 1905865-004
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	6.0	0.35	1.0		mg/L	1	5/21/2019 2:44:30 AM	45003
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2019 2:44:30 AM	45003
Surr: DNOP	93.6	0	70-130		%Rec	1	5/21/2019 2:44:30 AM	45003
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.39	0.25	0.50	J	mg/L	5	5/28/2019 11:27:30 AM	R60220
Chloride	92	0.31	2.5		mg/L	5	5/16/2019 8:00:04 PM	R59923
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/16/2019 8:00:04 PM	R59923
Bromide	ND	0.089	0.50		mg/L	5	5/16/2019 8:00:04 PM	R59923
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/16/2019 8:00:04 PM	R59923
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/16/2019 8:00:04 PM	R59923
Sulfate	0.48	0.27	2.5	J	mg/L	5	5/16/2019 8:00:04 PM	R59923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 9:32:22 PM	E60186
Barium	3.9	0.0065	0.020	*	mg/L	10	5/24/2019 9:34:23 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:32:22 PM	E60186
Boron	0.32	0.0045	0.040		mg/L	1	5/24/2019 9:32:22 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:32:22 PM	E60186
Calcium	80	0.062	1.0		mg/L	1	5/24/2019 9:32:22 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:32:22 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:32:22 PM	E60186
Copper	0.0051	0.0013	0.0060	J	mg/L	1	5/24/2019 9:32:22 PM	E60186
Iron	5.9	0.087	0.20	*	mg/L	10	5/24/2019 9:34:23 PM	E60186
Magnesium	15	0.050	1.0		mg/L	1	5/24/2019 9:32:22 PM	E60186
Manganese	1.0	0.00029	0.0020	*	mg/L	1	5/24/2019 9:32:22 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:32:22 PM	E60186
Nickel	0.033	0.0040	0.010		mg/L	1	5/24/2019 9:32:22 PM	E60186
Potassium	0.54	0.16	1.0	J	mg/L	1	5/24/2019 9:32:22 PM	E60186
Silver	0.0015	0.00094	0.0050	J	mg/L	1	5/24/2019 9:32:22 PM	E60186
Sodium	290	4.2	10		mg/L	10	5/24/2019 9:34:23 PM	E60186
Zinc	0.014	0.0023	0.010		mg/L	1	5/24/2019 9:32:22 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.37	0.0025	0.020	*	mg/L	1	5/30/2019 10:33:09 PM	45221
Barium	4.1	0.0032	0.010	*	mg/L	5	5/30/2019 10:35:15 PM	45221
Beryllium	ND	0.00028	0.0020		mg/L	1	5/30/2019 10:33:09 PM	45221
Boron	0.33	0.0045	0.040		mg/L	1	5/30/2019 10:33:09 PM	45221
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 10:33:09 PM	45221
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 10:33:09 PM	45221
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 10:33:09 PM	45221

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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 11:40:00 AM
Lab ID: 1905865-004
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 10:33:09 PM	45221
Iron	6.2	0.087	0.20	*	mg/L	10	5/31/2019 4:24:38 PM	45221
Manganese	1.1	0.0014	0.010	*	mg/L	5	5/30/2019 10:35:15 PM	45221
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 10:33:09 PM	45221
Nickel	0.033	0.0040	0.010		mg/L	1	5/30/2019 10:33:09 PM	45221
Silver	ND	0.0014	0.0050		mg/L	1	5/30/2019 10:33:09 PM	45221
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 10:33:09 PM	45221
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 9:23:51 PM	B60214
Arsenic	0.010	0.00010	0.0010	*	mg/L	1	5/24/2019 12:28:06 AM	D60134
Lead	ND	0.000055	0.00050		mg/L	1	5/24/2019 12:28:06 AM	D60134
Selenium	0.00020	0.00017	0.0010	J	mg/L	1	5/24/2019 12:28:06 AM	D60134
Thallium	ND	0.000048	0.00050		mg/L	1	5/24/2019 12:28:06 AM	D60134
Uranium	0.00013	0.000075	0.00050	J	mg/L	1	5/24/2019 12:28:06 AM	D60134
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 6:05:16 PM	45221
Arsenic	0.010	0.00031	0.0010	*	mg/L	1	5/29/2019 6:05:16 PM	45221
Lead	0.00077	0.000055	0.00050		mg/L	1	5/29/2019 6:05:16 PM	45221
Selenium	ND	0.00048	0.0010		mg/L	1	5/29/2019 6:05:16 PM	45221
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 6:05:16 PM	45221
Uranium	0.00010	0.000085	0.00050	J	mg/L	1	5/29/2019 6:05:16 PM	45221
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000041	0.000038	0.00020	J	mg/L	1	5/24/2019 11:15:06 AM	45169
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.9	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Acenaphthylene	ND	4.8	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Aniline	ND	7.2	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Anthracene	ND	5.3	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Azobenzene	ND	6.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Benz(a)anthracene	ND	7.2	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Benzo(a)pyrene	ND	7.1	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Benzo(b)fluoranthene	ND	6.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Benzo(g,h,i)perylene	ND	4.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Benzo(k)fluoranthene	ND	5.8	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Benzoic acid	ND	21	40		µg/L	1	5/25/2019 10:26:29 AM	45061
Benzyl alcohol	ND	4.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Bis(2-chloroethoxy)methane	ND	5.2	20		µg/L	1	5/25/2019 10:26:29 AM	45061

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Qualifiers:

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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 11:40:00 AM
Lab ID: 1905865-004
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	6.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Bis(2-chloroisopropyl)ether	ND	7.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Bis(2-ethylhexyl)phthalate	ND	8.6	20		µg/L	1	5/25/2019 10:26:29 AM	45061
4-Bromophenyl phenyl ether	ND	6.0	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Butyl benzyl phthalate	ND	6.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Carbazole	6.4	5.8	20	J	µg/L	1	5/25/2019 10:26:29 AM	45061
4-Chloro-3-methylphenol	ND	6.8	20		µg/L	1	5/25/2019 10:26:29 AM	45061
4-Chloroaniline	ND	4.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2-Chloronaphthalene	ND	6.1	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2-Chlorophenol	ND	5.4	20		µg/L	1	5/25/2019 10:26:29 AM	45061
4-Chlorophenyl phenyl ether	ND	4.9	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Chrysene	ND	5.6	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Di-n-butyl phthalate	ND	5.4	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Di-n-octyl phthalate	ND	7.0	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Dibenz(a,h)anthracene	ND	5.9	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Dibenzofuran	ND	6.4	20		µg/L	1	5/25/2019 10:26:29 AM	45061
1,2-Dichlorobenzene	ND	9.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
1,3-Dichlorobenzene	ND	11	20		µg/L	1	5/25/2019 10:26:29 AM	45061
1,4-Dichlorobenzene	ND	8.8	20		µg/L	1	5/25/2019 10:26:29 AM	45061
3,3´-Dichlorobenzidine	ND	5.6	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Diethyl phthalate	ND	5.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Dimethyl phthalate	ND	6.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2,4-Dichlorophenol	ND	5.8	40		µg/L	1	5/25/2019 10:26:29 AM	45061
2,4-Dimethylphenol	16	5.9	20	J	µg/L	1	5/25/2019 10:26:29 AM	45061
4,6-Dinitro-2-methylphenol	ND	5.8	40		µg/L	1	5/25/2019 10:26:29 AM	45061
2,4-Dinitrophenol	ND	5.2	40		µg/L	1	5/25/2019 10:26:29 AM	45061
2,4-Dinitrotoluene	ND	7.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2,6-Dinitrotoluene	ND	4.9	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Fluoranthene	ND	4.8	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Fluorene	6.5	5.8	20	J	µg/L	1	5/25/2019 10:26:29 AM	45061
Hexachlorobenzene	ND	6.2	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Hexachlorobutadiene	ND	9.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Hexachlorocyclopentadiene	ND	7.2	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Hexachloroethane	ND	9.6	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Indeno(1,2,3-cd)pyrene	ND	5.4	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Isophorone	ND	6.1	20		µg/L	1	5/25/2019 10:26:29 AM	45061
1-Methylnaphthalene	84	6.1	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2-Methylnaphthalene	93	6.0	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2-Methylphenol	ND	5.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 11:40:00 AM
Lab ID: 1905865-004 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	7.2	20		µg/L	1	5/25/2019 10:26:29 AM	45061
N-Nitrosodi-n-propylamine	ND	13	20		µg/L	1	5/25/2019 10:26:29 AM	45061
N-Nitrosodimethylamine	ND	10	20		µg/L	1	5/25/2019 10:26:29 AM	45061
N-Nitrosodiphenylamine	ND	4.8	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Naphthalene	260	8.2	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2-Nitroaniline	ND	6.3	20		µg/L	1	5/25/2019 10:26:29 AM	45061
3-Nitroaniline	ND	6.5	20		µg/L	1	5/25/2019 10:26:29 AM	45061
4-Nitroaniline	ND	5.4	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Nitrobenzene	ND	5.6	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2-Nitrophenol	ND	5.9	20		µg/L	1	5/25/2019 10:26:29 AM	45061
4-Nitrophenol	ND	15	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Pentachlorophenol	ND	5.5	40		µg/L	1	5/25/2019 10:26:29 AM	45061
Phenanthrene	ND	5.6	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Phenol	25	16	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Pyrene	ND	5.0	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Pyridine	ND	19	20		µg/L	1	5/25/2019 10:26:29 AM	45061
1,2,4-Trichlorobenzene	ND	8.1	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2,4,5-Trichlorophenol	ND	5.9	20		µg/L	1	5/25/2019 10:26:29 AM	45061
2,4,6-Trichlorophenol	ND	4.7	20		µg/L	1	5/25/2019 10:26:29 AM	45061
Surr: 2-Fluorophenol	73.5	0	15-101		%Rec	1	5/25/2019 10:26:29 AM	45061
Surr: Phenol-d5	59.1	0	15-84.6		%Rec	1	5/25/2019 10:26:29 AM	45061
Surr: 2,4,6-Tribromophenol	116	0	27.8-112	S	%Rec	1	5/25/2019 10:26:29 AM	45061
Surr: Nitrobenzene-d5	103	0	33-113		%Rec	1	5/25/2019 10:26:29 AM	45061
Surr: 2-Fluorobiphenyl	95.3	0	26.6-107		%Rec	1	5/25/2019 10:26:29 AM	45061
Surr: 4-Terphenyl-d14	110	0	18.7-148		%Rec	1	5/25/2019 10:26:29 AM	45061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	8300	33	200		µg/L	200	5/22/2019 7:39:58 PM	R60108
Toluene	59	7.0	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Ethylbenzene	1100	2.6	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Methyl tert-butyl ether (MTBE)	32	9.1	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2,4-Trimethylbenzene	9.9	4.3	20	J	µg/L	20	5/22/2019 8:08:33 PM	R60108
1,3,5-Trimethylbenzene	18	3.8	20	J	µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Naphthalene	330	5.5	40		µg/L	20	5/22/2019 8:08:33 PM	R60108
1-Methylnaphthalene	97	6.3	80		µg/L	20	5/22/2019 8:08:33 PM	R60108
2-Methylnaphthalene	110	6.9	80		µg/L	20	5/22/2019 8:08:33 PM	R60108
Acetone	ND	24	200		µg/L	20	5/22/2019 8:08:33 PM	R60108
Bromobenzene	ND	4.9	20		µg/L	20	5/22/2019 8:08:33 PM	R60108

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 11:40:00 AM
Lab ID: 1905865-004
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	2.7	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Bromoform	ND	5.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Bromomethane	ND	5.5	60		µg/L	20	5/22/2019 8:08:33 PM	R60108
2-Butanone	ND	42	200		µg/L	20	5/22/2019 8:08:33 PM	R60108
Carbon disulfide	ND	9.1	200		µg/L	20	5/22/2019 8:08:33 PM	R60108
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Chlorobenzene	ND	3.9	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Chloroethane	ND	3.6	40		µg/L	20	5/22/2019 8:08:33 PM	R60108
Chloroform	ND	2.4	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Chloromethane	ND	6.4	60		µg/L	20	5/22/2019 8:08:33 PM	R60108
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
cis-1,2-DCE	ND	3.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/22/2019 8:08:33 PM	R60108
Dibromochloromethane	ND	4.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Dibromomethane	ND	4.2	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,1-Dichloroethane	ND	2.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,1-Dichloroethene	ND	4.1	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
2-Hexanone	ND	31	200		µg/L	20	5/22/2019 8:08:33 PM	R60108
Isopropylbenzene	58	3.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
4-Isopropyltoluene	ND	4.3	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/22/2019 8:08:33 PM	R60108
Methylene Chloride	ND	3.1	60		µg/L	20	5/22/2019 8:08:33 PM	R60108
n-Butylbenzene	18	4.6	60	J	µg/L	20	5/22/2019 8:08:33 PM	R60108
n-Propylbenzene	160	4.3	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
sec-Butylbenzene	8.5	5.0	20	J	µg/L	20	5/22/2019 8:08:33 PM	R60108
Styrene	ND	3.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/22/2019 8:08:33 PM	R60108

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2019 2nd QTR GW Samples
Collection Date: 5/15/2019 11:40:00 AM
Lab ID: 1905865-004
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/22/2019 8:08:33 PM	R60108
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/22/2019 8:08:33 PM	R60108
Vinyl chloride	ND	3.6	20		µg/L	20	5/22/2019 8:08:33 PM	R60108
Xylenes, Total	300	9.1	30		µg/L	20	5/22/2019 8:08:33 PM	R60108
Surr: 1,2-Dichloroethane-d4	89.5	0	70-130		%Rec	20	5/22/2019 8:08:33 PM	R60108
Surr: 4-Bromofluorobenzene	94.3	0	70-130		%Rec	20	5/22/2019 8:08:33 PM	R60108
Surr: Dibromofluoromethane	97.7	0	70-130		%Rec	20	5/22/2019 8:08:33 PM	R60108
Surr: Toluene-d8	86.2	0	70-130		%Rec	20	5/22/2019 8:08:33 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	24	0.61	1.0		mg/L	20	5/22/2019 8:08:33 PM	G60108
Surr: BFB	96.6	0	70-130		%Rec	20	5/22/2019 8:08:33 PM	G60108

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-45221** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45221** RunNo: **60262**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036581** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0053	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	0.0019	0.0060								J
Cobalt	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	0.0028	0.0050								J
Zinc	ND	0.010								

Sample ID: **LLLCS-45221** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45221** RunNo: **60262**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036583** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	126	50	150			J
Barium	0.0029	0.0020	0.002000	0	146	50	150			
Beryllium	0.0022	0.0020	0.002000	0	112	50	150			
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0025	0.0020	0.002000	0	124	50	150			
Chromium	0.0075	0.0060	0.006000	0	126	50	150			
Cobalt	0.0035	0.0060	0.006000	0	58.9	50	150			J
Iron	0.025	0.020	0.02000	0	127	50	150			
Manganese	0.0023	0.0020	0.002000	0	115	50	150			
Molybdenum	0.0064	0.0080	0.008000	0	80.1	50	150			J
Nickel	0.0030	0.010	0.005000	0	59.5	50	150			J
Silver	0.0066	0.0050	0.005000	0	132	50	150			
Zinc	0.011	0.010	0.01000	0	110	50	150			

Sample ID: **LCS-45221** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45221** RunNo: **60262**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.44	0.020	0.5000	0	88.0	85	115			
Barium	0.43	0.0020	0.5000	0	86.3	85	115			

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LCS-45221** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45221** RunNo: **60262**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.44	0.0020	0.5000	0	88.0	85	115			
Boron	0.43	0.040	0.5000	0	85.1	85	115			
Cadmium	0.44	0.0020	0.5000	0	87.8	85	115			
Chromium	0.44	0.0060	0.5000	0	87.9	85	115			
Cobalt	0.44	0.0060	0.5000	0	87.9	85	115			
Iron	0.45	0.020	0.5000	0	89.6	85	115			
Manganese	0.44	0.0020	0.5000	0	88.9	85	115			
Molybdenum	0.43	0.0080	0.5000	0	86.4	85	115			
Nickel	0.44	0.010	0.5000	0	87.5	85	115			
Silver	0.089	0.0050	0.1000	0	88.8	85	115			
Zinc	0.43	0.010	0.5000	0	86.5	85	115			

Sample ID: **MB-45221** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45221** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037789** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0078	0.020	0.01000	0	77.6	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.2	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-45221** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037789** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0020	0.0020	0.002000	0	97.7	50	150			J
Chromium	0.0055	0.0060	0.006000	0	92.4	50	150			J
Cobalt	0.0065	0.0060	0.006000	0	109	50	150			
Copper	0.0064	0.0060	0.006000	0	106	50	150			
Iron	0.025	0.020	0.02000	0	126	50	150			
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Molybdenum	0.0093	0.0080	0.008000	0	116	50	150			
Nickel	0.0042	0.010	0.005000	0	85.0	50	150			J
Silver	0.0053	0.0050	0.005000	0	107	50	150			
Zinc	0.0095	0.010	0.01000	0	95.4	50	150			J

Sample ID: **LCS-45221** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037790** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.7	85	115			
Barium	0.47	0.0020	0.5000	0	93.8	85	115			
Beryllium	0.47	0.0020	0.5000	0	94.1	85	115			
Boron	0.48	0.040	0.5000	0	95.5	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.1	85	115			
Chromium	0.47	0.0060	0.5000	0	94.6	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.5	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.46	0.020	0.5000	0	92.8	85	115			
Manganese	0.47	0.0020	0.5000	0	94.4	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.2	85	115			
Nickel	0.47	0.010	0.5000	0	94.6	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.46	0.010	0.5000	0	92.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
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WO#: **1905865**
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Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-E**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0035	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	117	50	150			J
Barium	0.0016	0.0020	0.002000	0	80.4	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	95.4	50	150			J
Boron	0.039	0.040	0.04000	0	97.9	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	107	50	150			
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.6	50	150			J
Cobalt	0.0057	0.0060	0.006000	0	94.3	50	150			J
Copper	0.0051	0.0060	0.006000	0	85.0	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0051	0.010	0.005000	0	102	50	150			J
Potassium	0.51	1.0	0.5000	0	103	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-E** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **E60186** RunNo: **60186**
Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0052	0.0050	0.005000	0	104	50	150			
Sodium	0.61	1.0	0.5000	0	121	50	150			J
Zinc	0.0046	0.010	0.005000	0	91.7	50	150			J

Sample ID: **LCS-E** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **E60186** RunNo: **60186**
Prep Date: Analysis Date: **5/24/2019** SeqNo: **2033213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			
Barium	0.48	0.0020	0.5000	0	95.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.1	85	115			
Boron	0.49	0.040	0.5000	0	98.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.3	85	115			
Iron	0.48	0.020	0.5000	0	96.9	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.4	85	115			
Nickel	0.47	0.010	0.5000	0	94.2	85	115			
Potassium	50	1.0	50.00	0	99.5	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
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Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-45221** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45221** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45221** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45221** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00087	0.0010	0.001000	0	86.6	50	150			J
Arsenic	0.00093	0.0010	0.001000	0	92.8	50	150			J
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00078	0.0010	0.001000	0	78.2	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	92.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.1	50	150			J

Sample ID: **MSLCS-45221** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45221** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	100	85	115			
Arsenic	0.026	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.027	0.0010	0.02500	0	108	85	115			
Thallium	0.013	0.00050	0.01250	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D60134** RunNo: **60134**
Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	0.00012	0.00050								J

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **D60134** RunNo: **60134**
Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030985** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00093	0.0010	0.001000	0	92.7	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00094	0.0010	0.001000	0	93.7	50	150			J
Thallium	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.6	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **D60134** RunNo: **60134**
Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030986** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.9	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.023	0.0010	0.02500	0	93.2	85	115			
Thallium	0.013	0.00050	0.01250	0	101	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60214** RunNo: **60214**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60214** RunNo: **60214**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034590** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034590** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00083	0.0010	0.001000	0	82.6	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034591** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.6	85	115			

Sample ID: **1905865-004EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-63**	Batch ID: **B60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034619** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
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Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-45169**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **45169**	RunNo: **60151**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2031890** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-45169**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **45169**	RunNo: **60151**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2031891** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.3	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R59923**	RunNo: **59923**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023490** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R59923**	RunNo: **59923**
Prep Date:	Analysis Date: **5/16/2019**	SeqNo: **2023491** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.5	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.8	90	110			
Bromide	2.4	0.10	2.500	0	97.7	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.7	90	110			
Sulfate	9.9	0.50	10.00	0	98.8	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R60220**	RunNo: **60220**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034766** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R60220**	RunNo: **60220**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LCS-45003**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **45003**	RunNo: **59994**
Prep Date: **5/17/2019**	Analysis Date: **5/21/2019**	SeqNo: **2025445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	107	71.8	135			
Surr: DNOP	0.54		0.5000		109	70	130			

Sample ID: **MB-45003**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **45003**	RunNo: **60017**
Prep Date: **5/17/2019**	Analysis Date: **5/21/2019**	SeqNo: **2025611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		95.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030408** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.5	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.0	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.5	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.8	70	130			
Surr: Toluene-d8	8.6		10.00		85.9	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.16	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.0		10.00		80.2	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.1	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.1	70	130			
Surr: Toluene-d8	8.8		10.00		88.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **mb-45061** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **45061** RunNo: **60170**
Prep Date: **5/21/2019** Analysis Date: **5/24/2019** SeqNo: **2032383** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	4.7	10								J
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **mb-45061** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **45061** RunNo: **60170**
Prep Date: **5/21/2019** Analysis Date: **5/24/2019** SeqNo: **2032383** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		79.8	15	101			
Surr: Phenol-d5	140		200.0		71.7	15	84.6			
Surr: 2,4,6-Tribromophenol	180		200.0		90.4	27.8	112			
Surr: Nitrobenzene-d5	92		100.0		92.3	33	113			
Surr: 2-Fluorobiphenyl	71		100.0		71.3	26.6	107			
Surr: 4-Terphenyl-d14	89		100.0		89.1	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **lcs-45061** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **45061** RunNo: **60170**
Prep Date: **5/21/2019** Analysis Date: **5/24/2019** SeqNo: **2042866** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	110	10	100.0	0	105	32.2	94			S
4-Chloro-3-methylphenol	120	10	100.0	0	121	37.7	101			S
2-Chlorophenol	110	10	100.0	0	106	32.6	90.1			S
1,4-Dichlorobenzene	86	10	100.0	0	86.1	30	87.2			
2,4-Dinitrotoluene	110	10	100.0	0	112	35.9	85.8			S
N-Nitrosodi-n-propylamine	100	10	100.0	0	101	37.1	108			
4-Nitrophenol	83	10	100.0	0	83.1	22.4	86.6			
Pentachlorophenol	91	20	100.0	0	91.4	31.6	91			S
Phenol	85	10	100.0	0	85.1	21.7	84.9			S
Pyrene	100	10	100.0	0	103	46.3	103			S
1,2,4-Trichlorobenzene	100	10	100.0	0	101	30.2	88.3			S
Surr: 2-Fluorophenol	91		100.0		90.8	15	101			
Surr: Phenol-d5	85		100.0		84.6	15	84.6			S
Surr: 2,4,6-Tribromophenol	110		100.0		111	27.8	112			
Surr: Nitrobenzene-d5	120		100.0		116	33	113			S
Surr: 2-Fluorobiphenyl	110		100.0		109	26.6	107			S
Surr: 4-Terphenyl-d14	120		100.0		120	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905865**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030457** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.1	70	130			
Surr: BFB	9.8		10.00		98.3	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030458** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.9		10.00		99.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905865** RcptNo: 1

Received By: **Erin Melendrez** **5/16/2019 4:01:00 PM**

Completed By: **Erin Melendrez** **5/16/2019 4:32:41 PM**

Reviewed By: VV2 5/16/19

LB: ENM 5/16/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐

Samples were collected the same day and chilled.

5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 6
(<2 or >12 unless noted)
Adjusted? NO

Checked by: ENM 5/16/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	9.7	Good	Not Present			
2	4.9	Good	Not Present			

Chain-of-Custody Record

Client: MARATHON - WESTERN REFINING SW

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2019 2ND QTR GW SAMPLES

Project #:

OW-64, 63

Project Manager:

Brian Moore

Sampler: C. JOHNSON (CAJohnson1@marathonpetroleum.com)

On Ice: ☒ Yes ☐ No

Sample Temperature: 9.6+0.1(CF)=9.7°C 4.8+0.1(CF)=4.9°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905865	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS	Air Bubbles (Y or N)
5/15/2019	700	aqueous	FIELD BLANK	3-40ML VOAS	HCL	-001	X						
5/15/2019	700	aqueous	TRIP BLANK	3-40ML VOAS	HCL	-002	X						
5/15/2019	1325	aqueous	OW-64	Misc	Misc	-003	X	X	X	X	2	X	
5/15/2019	1140	aqueous	OW-63	Misc	Misc	-004	X	X	X	X	X	X	

Date	Time	Relinquished by:	Received by:	Date	Time
5/16/19	1400			5/16/19	1410
5/16/19	1601			5/16/19	1601

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 05, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2019 2ND QTR GW Samples OrderNo.: 1905866

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/16/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 7:00:00 AM
Lab ID: 1905866-001 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Naphthalene	0.31	0.28	2.0	J	µg/L	1	5/22/2019 8:37:13 PM	R60108
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Acetone	ND	1.2	10		µg/L	1	5/22/2019 8:37:13 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 8:37:13 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 8:37:13 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Chloroform	ND	0.12	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 8:37:13 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 7:00:00 AM
Lab ID: 1905866-001 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 8:37:13 PM	R60108
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 8:37:13 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 8:37:13 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 8:37:13 PM	R60108
Surr: 1,2-Dichloroethane-d4	86.8	0	70-130		%Rec	1	5/22/2019 8:37:13 PM	R60108
Surr: 4-Bromofluorobenzene	90.0	0	70-130		%Rec	1	5/22/2019 8:37:13 PM	R60108
Surr: Dibromofluoromethane	98.7	0	70-130		%Rec	1	5/22/2019 8:37:13 PM	R60108
Surr: Toluene-d8	88.7	0	70-130		%Rec	1	5/22/2019 8:37:13 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 7:00:00 AM
Lab ID: 1905866-002 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Naphthalene	ND	0.28	2.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Acetone	6.5	1.2	10	J	µg/L	1	5/22/2019 9:05:49 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 9:05:49 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 9:05:49 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Chloroform	ND	0.12	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 9:05:49 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 7:00:00 AM
Lab ID: 1905866-002 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 9:05:49 PM	R60108
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 9:05:49 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 9:05:49 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 9:05:49 PM	R60108
Surr: 1,2-Dichloroethane-d4	86.3	0	70-130		%Rec	1	5/22/2019 9:05:49 PM	R60108
Surr: 4-Bromofluorobenzene	91.0	0	70-130		%Rec	1	5/22/2019 9:05:49 PM	R60108
Surr: Dibromofluoromethane	97.1	0	70-130		%Rec	1	5/22/2019 9:05:49 PM	R60108
Surr: Toluene-d8	85.2	0	70-130		%Rec	1	5/22/2019 9:05:49 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 9:25:00 AM
Lab ID: 1905866-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	7.8	0.35	1.0		mg/L	1	5/21/2019 3:08:32 AM	45003
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2019 3:08:32 AM	45003
Surr: DNOP	93.0	0	70-130		%Rec	1	5/21/2019 3:08:32 AM	45003
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/16/2019 8:24:53 PM	R59923
Chloride	140	1.2	10		mg/L	20	5/16/2019 8:37:17 PM	R59923
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/16/2019 8:24:53 PM	R59923
Bromide	1.8	0.089	0.50		mg/L	5	5/16/2019 8:24:53 PM	R59923
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/16/2019 8:24:53 PM	R59923
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/16/2019 8:24:53 PM	R59923
Sulfate	1.1	0.27	2.5	J	mg/L	5	5/16/2019 8:24:53 PM	R59923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/24/2019 9:36:41 PM	E60186
Barium	3.6	0.0065	0.020	*	mg/L	10	5/24/2019 9:38:42 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:36:41 PM	E60186
Boron	0.27	0.0045	0.040		mg/L	1	5/24/2019 9:36:41 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:36:41 PM	E60186
Calcium	120	0.62	10		mg/L	10	5/24/2019 9:38:42 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:36:41 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:36:41 PM	E60186
Copper	0.0041	0.0013	0.0060	J	mg/L	1	5/24/2019 9:36:41 PM	E60186
Iron	2.5	0.087	0.20	*	mg/L	10	5/24/2019 9:38:42 PM	E60186
Magnesium	16	0.050	1.0		mg/L	1	5/24/2019 9:36:41 PM	E60186
Manganese	2.1	0.0029	0.020	*	mg/L	10	5/24/2019 9:38:42 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:36:41 PM	E60186
Nickel	0.075	0.0040	0.010		mg/L	1	5/24/2019 9:36:41 PM	E60186
Potassium	0.77	0.16	1.0	J	mg/L	1	5/24/2019 9:36:41 PM	E60186
Silver	0.0024	0.00094	0.0050	J	mg/L	1	5/24/2019 9:36:41 PM	E60186
Sodium	270	4.2	10		mg/L	10	5/24/2019 9:38:42 PM	E60186
Zinc	0.020	0.0023	0.010		mg/L	1	5/24/2019 9:36:41 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.84	0.0025	0.020	*	mg/L	1	5/30/2019 10:44:15 PM	45221
Barium	3.9	0.0032	0.010	*	mg/L	5	5/30/2019 10:46:18 PM	45221
Beryllium	0.00039	0.00028	0.0020	J	mg/L	1	5/30/2019 10:44:15 PM	45221
Boron	0.26	0.0045	0.040		mg/L	1	5/30/2019 10:44:15 PM	45221
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 10:44:15 PM	45221
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 10:44:15 PM	45221
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 10:44:15 PM	45221

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 9:25:00 AM
Lab ID: 1905866-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 10:44:15 PM	45221
Iron	4.9	0.044	0.10	*	mg/L	5	5/30/2019 10:46:18 PM	45221
Manganese	2.6	0.0014	0.010	*	mg/L	5	5/30/2019 10:46:18 PM	45221
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 10:44:15 PM	45221
Nickel	0.078	0.0040	0.010		mg/L	1	5/30/2019 10:44:15 PM	45221
Silver	0.0015	0.0014	0.0050	J	mg/L	1	5/30/2019 10:44:15 PM	45221
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 10:44:15 PM	45221
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 9:29:16 PM	B60214
Arsenic	0.0029	0.00010	0.0010		mg/L	1	5/24/2019 12:30:48 AM	D60134
Lead	ND	0.000055	0.00050		mg/L	1	5/24/2019 12:30:48 AM	D60134
Selenium	0.00022	0.00017	0.0010	J	mg/L	1	5/24/2019 12:30:48 AM	D60134
Thallium	ND	0.000048	0.00050		mg/L	1	5/24/2019 12:30:48 AM	D60134
Uranium	0.00033	0.000075	0.00050	J	mg/L	1	5/24/2019 12:30:48 AM	D60134
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 6:07:28 PM	45221
Arsenic	0.0035	0.00031	0.0010		mg/L	1	5/29/2019 6:07:28 PM	45221
Lead	0.0025	0.000055	0.00050		mg/L	1	5/29/2019 6:07:28 PM	45221
Selenium	0.00061	0.00048	0.0010	J	mg/L	1	5/29/2019 6:07:28 PM	45221
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 6:07:28 PM	45221
Uranium	0.00051	0.000085	0.00050		mg/L	1	5/29/2019 6:07:28 PM	45221
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/24/2019 11:18:32 AM	45169
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	5.9	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Acenaphthylene	ND	4.8	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Aniline	ND	7.2	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Anthracene	ND	5.3	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Azobenzene	ND	6.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Benz(a)anthracene	ND	7.2	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Benzo(a)pyrene	ND	7.1	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Benzo(b)fluoranthene	ND	6.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Benzo(g,h,i)perylene	ND	4.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Benzo(k)fluoranthene	ND	5.8	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Benzoic acid	ND	21	40		µg/L	1	5/24/2019 8:53:37 PM	45061
Benzyl alcohol	ND	4.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Bis(2-chloroethoxy)methane	ND	5.2	20		µg/L	1	5/24/2019 8:53:37 PM	45061

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Collection Date: 5/16/2019 9:25:00 AM
Lab ID: 1905866-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	6.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Bis(2-chloroisopropyl)ether	ND	7.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Bis(2-ethylhexyl)phthalate	ND	8.6	20		µg/L	1	5/24/2019 8:53:37 PM	45061
4-Bromophenyl phenyl ether	ND	6.0	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Butyl benzyl phthalate	ND	6.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Carbazole	ND	5.8	20		µg/L	1	5/24/2019 8:53:37 PM	45061
4-Chloro-3-methylphenol	ND	6.8	20		µg/L	1	5/24/2019 8:53:37 PM	45061
4-Chloroaniline	ND	4.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2-Chloronaphthalene	ND	6.1	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2-Chlorophenol	ND	5.4	20		µg/L	1	5/24/2019 8:53:37 PM	45061
4-Chlorophenyl phenyl ether	ND	4.9	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Chrysene	ND	5.6	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Di-n-butyl phthalate	ND	5.4	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Di-n-octyl phthalate	ND	7.0	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Dibenz(a,h)anthracene	ND	5.9	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Dibenzofuran	ND	6.4	20		µg/L	1	5/24/2019 8:53:37 PM	45061
1,2-Dichlorobenzene	ND	9.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
1,3-Dichlorobenzene	ND	11	20		µg/L	1	5/24/2019 8:53:37 PM	45061
1,4-Dichlorobenzene	ND	8.8	20		µg/L	1	5/24/2019 8:53:37 PM	45061
3,3´-Dichlorobenzidine	ND	5.6	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Diethyl phthalate	ND	5.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Dimethyl phthalate	ND	6.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2,4-Dichlorophenol	ND	5.8	40		µg/L	1	5/24/2019 8:53:37 PM	45061
2,4-Dimethylphenol	ND	5.9	20		µg/L	1	5/24/2019 8:53:37 PM	45061
4,6-Dinitro-2-methylphenol	ND	5.8	40		µg/L	1	5/24/2019 8:53:37 PM	45061
2,4-Dinitrophenol	ND	5.2	40		µg/L	1	5/24/2019 8:53:37 PM	45061
2,4-Dinitrotoluene	ND	7.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2,6-Dinitrotoluene	ND	4.9	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Fluoranthene	ND	4.8	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Fluorene	8.4	5.8	20	J	µg/L	1	5/24/2019 8:53:37 PM	45061
Hexachlorobenzene	ND	6.2	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Hexachlorobutadiene	ND	9.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Hexachlorocyclopentadiene	ND	7.2	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Hexachloroethane	ND	9.6	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Indeno(1,2,3-cd)pyrene	ND	5.4	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Isophorone	ND	6.1	20		µg/L	1	5/24/2019 8:53:37 PM	45061
1-Methylnaphthalene	79	6.1	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2-Methylnaphthalene	38	6.0	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2-Methylphenol	ND	5.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061

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Client Sample ID: OW-57
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Collection Date: 5/16/2019 9:25:00 AM
Lab ID: 1905866-003
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	7.2	20		µg/L	1	5/24/2019 8:53:37 PM	45061
N-Nitrosodi-n-propylamine	ND	13	20		µg/L	1	5/24/2019 8:53:37 PM	45061
N-Nitrosodimethylamine	ND	10	20		µg/L	1	5/24/2019 8:53:37 PM	45061
N-Nitrosodiphenylamine	ND	4.8	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Naphthalene	80	8.2	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2-Nitroaniline	ND	6.3	20		µg/L	1	5/24/2019 8:53:37 PM	45061
3-Nitroaniline	ND	6.5	20		µg/L	1	5/24/2019 8:53:37 PM	45061
4-Nitroaniline	ND	5.4	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Nitrobenzene	ND	5.6	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2-Nitrophenol	ND	5.9	20		µg/L	1	5/24/2019 8:53:37 PM	45061
4-Nitrophenol	ND	15	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Pentachlorophenol	ND	5.5	40		µg/L	1	5/24/2019 8:53:37 PM	45061
Phenanthrene	ND	5.6	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Phenol	36	16	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Pyrene	ND	5.0	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Pyridine	ND	19	20		µg/L	1	5/24/2019 8:53:37 PM	45061
1,2,4-Trichlorobenzene	ND	8.1	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2,4,5-Trichlorophenol	ND	5.9	20		µg/L	1	5/24/2019 8:53:37 PM	45061
2,4,6-Trichlorophenol	ND	4.7	20		µg/L	1	5/24/2019 8:53:37 PM	45061
Surr: 2-Fluorophenol	52.3	0	15-101		%Rec	1	5/24/2019 8:53:37 PM	45061
Surr: Phenol-d5	38.5	0	15-84.6		%Rec	1	5/24/2019 8:53:37 PM	45061
Surr: 2,4,6-Tribromophenol	78.8	0	27.8-112		%Rec	1	5/24/2019 8:53:37 PM	45061
Surr: Nitrobenzene-d5	81.5	0	33-113		%Rec	1	5/24/2019 8:53:37 PM	45061
Surr: 2-Fluorobiphenyl	75.2	0	26.6-107		%Rec	1	5/24/2019 8:53:37 PM	45061
Surr: 4-Terphenyl-d14	83.4	0	18.7-148		%Rec	1	5/24/2019 8:53:37 PM	45061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11000	33	200		µg/L	200	5/22/2019 9:34:24 PM	R60108
Toluene	89	7.0	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Ethylbenzene	540	2.6	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Methyl tert-butyl ether (MTBE)	95	9.1	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2,4-Trimethylbenzene	5.0	4.3	20	J	µg/L	20	5/22/2019 10:03:09 PM	R60108
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Naphthalene	130	5.5	40		µg/L	20	5/22/2019 10:03:09 PM	R60108
1-Methylnaphthalene	130	6.3	80		µg/L	20	5/22/2019 10:03:09 PM	R60108
2-Methylnaphthalene	49	6.9	80	J	µg/L	20	5/22/2019 10:03:09 PM	R60108
Acetone	ND	24	200		µg/L	20	5/22/2019 10:03:09 PM	R60108
Bromobenzene	ND	4.9	20		µg/L	20	5/22/2019 10:03:09 PM	R60108

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	2.7	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Bromoform	ND	5.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Bromomethane	ND	5.5	60		µg/L	20	5/22/2019 10:03:09 PM	R60108
2-Butanone	ND	42	200		µg/L	20	5/22/2019 10:03:09 PM	R60108
Carbon disulfide	ND	9.1	200		µg/L	20	5/22/2019 10:03:09 PM	R60108
Carbon Tetrachloride	ND	2.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Chlorobenzene	ND	3.9	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Chloroethane	ND	3.6	40		µg/L	20	5/22/2019 10:03:09 PM	R60108
Chloroform	ND	2.4	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Chloromethane	ND	6.4	60		µg/L	20	5/22/2019 10:03:09 PM	R60108
2-Chlorotoluene	ND	4.9	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
4-Chlorotoluene	ND	4.7	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
cis-1,2-DCE	ND	3.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	5/22/2019 10:03:09 PM	R60108
Dibromochloromethane	ND	4.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Dibromomethane	ND	4.2	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,1-Dichloroethane	ND	2.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,1-Dichloroethene	ND	4.1	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2-Dichloropropane	ND	4.2	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,3-Dichloropropane	ND	4.0	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
2,2-Dichloropropane	ND	4.7	40		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,1-Dichloropropene	ND	3.3	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Hexachlorobutadiene	ND	6.2	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
2-Hexanone	ND	31	200		µg/L	20	5/22/2019 10:03:09 PM	R60108
Isopropylbenzene	15	3.8	20	J	µg/L	20	5/22/2019 10:03:09 PM	R60108
4-Isopropyltoluene	ND	4.3	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/22/2019 10:03:09 PM	R60108
Methylene Chloride	ND	3.1	60		µg/L	20	5/22/2019 10:03:09 PM	R60108
n-Butylbenzene	ND	4.6	60		µg/L	20	5/22/2019 10:03:09 PM	R60108
n-Propylbenzene	39	4.3	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
sec-Butylbenzene	ND	5.0	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Styrene	ND	3.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
tert-Butylbenzene	ND	4.1	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	5/22/2019 10:03:09 PM	R60108

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EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	5/22/2019 10:03:09 PM	R60108
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
trans-1,2-DCE	ND	3.6	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Trichlorofluoromethane	ND	3.8	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	5/22/2019 10:03:09 PM	R60108
Vinyl chloride	ND	3.6	20		µg/L	20	5/22/2019 10:03:09 PM	R60108
Xylenes, Total	110	9.1	30		µg/L	20	5/22/2019 10:03:09 PM	R60108
Surr: 1,2-Dichloroethane-d4	86.5	0	70-130		%Rec	20	5/22/2019 10:03:09 PM	R60108
Surr: 4-Bromofluorobenzene	91.4	0	70-130		%Rec	20	5/22/2019 10:03:09 PM	R60108
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	20	5/22/2019 10:03:09 PM	R60108
Surr: Toluene-d8	87.3	0	70-130		%Rec	20	5/22/2019 10:03:09 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	19	0.61	1.0		mg/L	20	5/22/2019 10:03:09 PM	G60108
Surr: BFB	98.9	0	70-130		%Rec	20	5/22/2019 10:03:09 PM	G60108

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 12:00:00 PM
Lab ID: 1905866-004
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	5/22/2019 4:41:22 AM	45060
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.3	0.35	1.0		mg/L	1	5/21/2019 3:32:25 AM	45003
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2019 3:32:25 AM	45003
Surr: DNOP	89.3	0	70-130		%Rec	1	5/21/2019 3:32:25 AM	45003
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.59	0.25	0.50		mg/L	5	5/28/2019 11:39:55 AM	R6022C
Chloride	190	1.2	10		mg/L	20	5/16/2019 9:02:07 PM	R59923
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/16/2019 8:49:43 PM	R59923
Bromide	0.99	0.089	0.50		mg/L	5	5/16/2019 8:49:43 PM	R59923
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/16/2019 8:49:43 PM	R59923
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/16/2019 8:49:43 PM	R59923
Sulfate	ND	0.27	2.5		mg/L	5	5/16/2019 8:49:43 PM	R59923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.048	0.0025	0.020		mg/L	1	5/24/2019 9:41:00 PM	E60186
Barium	2.0	0.0032	0.010		mg/L	5	5/24/2019 9:49:43 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:41:00 PM	E60186
Boron	0.35	0.0045	0.040		mg/L	1	5/24/2019 9:41:00 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:41:00 PM	E60186
Calcium	87	0.062	1.0		mg/L	1	5/24/2019 9:41:00 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:41:00 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:41:00 PM	E60186
Copper	0.0038	0.0013	0.0060	J	mg/L	1	5/24/2019 9:41:00 PM	E60186
Iron	2.0	0.044	0.10	*	mg/L	5	5/24/2019 9:49:43 PM	E60186
Magnesium	23	0.050	1.0		mg/L	1	5/24/2019 9:41:00 PM	E60186
Manganese	2.1	0.0014	0.010	*	mg/L	5	5/24/2019 9:49:43 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:41:00 PM	E60186
Nickel	0.0042	0.0040	0.010	J	mg/L	1	5/24/2019 9:41:00 PM	E60186
Potassium	0.42	0.16	1.0	J	mg/L	1	5/24/2019 9:41:00 PM	E60186
Silver	0.0017	0.00094	0.0050	J	mg/L	1	5/24/2019 9:41:00 PM	E60186
Sodium	270	2.1	5.0		mg/L	5	5/24/2019 9:49:43 PM	E60186
Zinc	0.015	0.0023	0.010		mg/L	1	5/24/2019 9:41:00 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.1	0.012	0.10	*	mg/L	5	5/30/2019 10:50:26 PM	45221
Barium	2.2	0.0032	0.010	*	mg/L	5	5/30/2019 10:50:26 PM	45221
Beryllium	0.00048	0.00028	0.0020	J	mg/L	1	5/30/2019 10:48:24 PM	45221
Boron	0.35	0.0045	0.040		mg/L	1	5/30/2019 10:48:24 PM	45221

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 10:48:24 PM	45221
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 10:48:24 PM	45221
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 10:48:24 PM	45221
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 10:48:24 PM	45221
Iron	3.8	0.044	0.10	*	mg/L	5	5/30/2019 10:50:26 PM	45221
Manganese	2.2	0.0014	0.010	*	mg/L	5	5/30/2019 10:50:26 PM	45221
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 10:48:24 PM	45221
Nickel	0.0042	0.0040	0.010	J	mg/L	1	5/30/2019 10:48:24 PM	45221
Silver	ND	0.0014	0.0050		mg/L	1	5/30/2019 10:48:24 PM	45221
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 10:48:24 PM	45221
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 9:31:58 PM	B60214
Arsenic	0.0014	0.00010	0.0010		mg/L	1	5/24/2019 12:38:59 AM	D60134
Lead	0.000070	0.000055	0.00050	J	mg/L	1	5/24/2019 12:38:59 AM	D60134
Selenium	0.00030	0.00017	0.0010	J	mg/L	1	5/24/2019 12:38:59 AM	D60134
Thallium	ND	0.000048	0.00050		mg/L	1	5/24/2019 12:38:59 AM	D60134
Uranium	0.00065	0.000075	0.00050		mg/L	1	5/24/2019 12:38:59 AM	D60134
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 6:09:39 PM	45221
Arsenic	0.0019	0.00031	0.0010		mg/L	1	5/29/2019 6:09:39 PM	45221
Lead	0.0032	0.000055	0.00050		mg/L	1	5/29/2019 6:09:39 PM	45221
Selenium	0.00056	0.00048	0.0010	J	mg/L	1	5/29/2019 6:09:39 PM	45221
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 6:09:39 PM	45221
Uranium	0.00096	0.000085	0.00050		mg/L	1	5/29/2019 6:09:39 PM	45221
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/24/2019 11:27:12 AM	45169
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	7.2	5.9	20	J	µg/L	1	5/24/2019 9:23:30 PM	45061
Acenaphthylene	ND	4.8	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Aniline	ND	7.2	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Anthracene	ND	5.3	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Azobenzene	ND	6.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Benz(a)anthracene	ND	7.2	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Benzo(a)pyrene	ND	7.1	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Benzo(b)fluoranthene	ND	6.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Benzo(g,h,i)perylene	ND	4.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Benzo(k)fluoranthene	ND	5.8	20		µg/L	1	5/24/2019 9:23:30 PM	45061

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Lab ID: 1905866-004 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	21	40		µg/L	1	5/24/2019 9:23:30 PM	45061
Benzyl alcohol	ND	4.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Bis(2-chloroethoxy)methane	ND	5.2	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Bis(2-chloroethyl)ether	ND	6.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Bis(2-chloroisopropyl)ether	ND	7.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Bis(2-ethylhexyl)phthalate	ND	8.6	20		µg/L	1	5/24/2019 9:23:30 PM	45061
4-Bromophenyl phenyl ether	ND	6.0	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Butyl benzyl phthalate	ND	6.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Carbazole	ND	5.8	20		µg/L	1	5/24/2019 9:23:30 PM	45061
4-Chloro-3-methylphenol	ND	6.8	20		µg/L	1	5/24/2019 9:23:30 PM	45061
4-Chloroaniline	ND	4.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2-Chloronaphthalene	ND	6.1	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2-Chlorophenol	ND	5.4	20		µg/L	1	5/24/2019 9:23:30 PM	45061
4-Chlorophenyl phenyl ether	ND	4.9	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Chrysene	ND	5.6	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Di-n-butyl phthalate	ND	5.4	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Di-n-octyl phthalate	ND	7.0	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Dibenz(a,h)anthracene	ND	5.9	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Dibenzofuran	ND	6.4	20		µg/L	1	5/24/2019 9:23:30 PM	45061
1,2-Dichlorobenzene	ND	9.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
1,3-Dichlorobenzene	ND	11	20		µg/L	1	5/24/2019 9:23:30 PM	45061
1,4-Dichlorobenzene	ND	8.8	20		µg/L	1	5/24/2019 9:23:30 PM	45061
3,3´-Dichlorobenzidine	ND	5.6	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Diethyl phthalate	ND	5.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Dimethyl phthalate	ND	6.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2,4-Dichlorophenol	ND	5.8	40		µg/L	1	5/24/2019 9:23:30 PM	45061
2,4-Dimethylphenol	ND	5.9	20		µg/L	1	5/24/2019 9:23:30 PM	45061
4,6-Dinitro-2-methylphenol	ND	5.8	40		µg/L	1	5/24/2019 9:23:30 PM	45061
2,4-Dinitrophenol	ND	5.2	40		µg/L	1	5/24/2019 9:23:30 PM	45061
2,4-Dinitrotoluene	ND	7.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2,6-Dinitrotoluene	ND	4.9	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Fluoranthene	ND	4.8	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Fluorene	11	5.8	20	J	µg/L	1	5/24/2019 9:23:30 PM	45061
Hexachlorobenzene	ND	6.2	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Hexachlorobutadiene	ND	9.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Hexachlorocyclopentadiene	ND	7.2	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Hexachloroethane	ND	9.6	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Indeno(1,2,3-cd)pyrene	ND	5.4	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Isophorone	ND	6.1	20		µg/L	1	5/24/2019 9:23:30 PM	45061

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Lab ID: 1905866-004
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	80	6.1	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2-Methylnaphthalene	20	6.0	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2-Methylphenol	ND	5.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
3+4-Methylphenol	ND	7.2	20		µg/L	1	5/24/2019 9:23:30 PM	45061
N-Nitrosodi-n-propylamine	ND	13	20		µg/L	1	5/24/2019 9:23:30 PM	45061
N-Nitrosodimethylamine	ND	10	20		µg/L	1	5/24/2019 9:23:30 PM	45061
N-Nitrosodiphenylamine	ND	4.8	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Naphthalene	12	8.2	20	J	µg/L	1	5/24/2019 9:23:30 PM	45061
2-Nitroaniline	ND	6.3	20		µg/L	1	5/24/2019 9:23:30 PM	45061
3-Nitroaniline	ND	6.5	20		µg/L	1	5/24/2019 9:23:30 PM	45061
4-Nitroaniline	ND	5.4	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Nitrobenzene	ND	5.6	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2-Nitrophenol	ND	5.9	20		µg/L	1	5/24/2019 9:23:30 PM	45061
4-Nitrophenol	ND	15	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Pentachlorophenol	ND	5.5	40		µg/L	1	5/24/2019 9:23:30 PM	45061
Phenanthrene	ND	5.6	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Phenol	ND	16	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Pyrene	ND	5.0	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Pyridine	ND	19	20		µg/L	1	5/24/2019 9:23:30 PM	45061
1,2,4-Trichlorobenzene	ND	8.1	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2,4,5-Trichlorophenol	ND	5.9	20		µg/L	1	5/24/2019 9:23:30 PM	45061
2,4,6-Trichlorophenol	ND	4.7	20		µg/L	1	5/24/2019 9:23:30 PM	45061
Surr: 2-Fluorophenol	65.2	0	15-101		%Rec	1	5/24/2019 9:23:30 PM	45061
Surr: Phenol-d5	48.9	0	15-84.6		%Rec	1	5/24/2019 9:23:30 PM	45061
Surr: 2,4,6-Tribromophenol	91.4	0	27.8-112		%Rec	1	5/24/2019 9:23:30 PM	45061
Surr: Nitrobenzene-d5	94.9	0	33-113		%Rec	1	5/24/2019 9:23:30 PM	45061
Surr: 2-Fluorobiphenyl	75.6	0	26.6-107		%Rec	1	5/24/2019 9:23:30 PM	45061
Surr: 4-Terphenyl-d14	107	0	18.7-148		%Rec	1	5/24/2019 9:23:30 PM	45061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	140	0.33	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Toluene	ND	0.70	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Ethylbenzene	2.3	0.26	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Methyl tert-butyl ether (MTBE)	130	0.91	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2,4-Trimethylbenzene	0.44	0.43	2.0	J	µg/L	2	5/22/2019 10:31:53 PM	R60108
1,3,5-Trimethylbenzene	ND	0.38	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.39	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Naphthalene	19	0.55	4.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1-Methylnaphthalene	120	0.63	8.0		µg/L	2	5/22/2019 10:31:53 PM	R60108

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	28	0.69	8.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Acetone	ND	2.4	20		µg/L	2	5/22/2019 10:31:53 PM	R60108
Bromobenzene	ND	0.49	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Bromodichloromethane	ND	0.27	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Bromoform	ND	0.58	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Bromomethane	ND	0.55	6.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
2-Butanone	ND	4.2	20		µg/L	2	5/22/2019 10:31:53 PM	R60108
Carbon disulfide	ND	0.91	20		µg/L	2	5/22/2019 10:31:53 PM	R60108
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Chlorobenzene	ND	0.39	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Chloroethane	ND	0.36	4.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Chloroform	ND	0.24	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Chloromethane	ND	0.64	6.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
cis-1,2-DCE	ND	0.38	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Dibromochloromethane	ND	0.48	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Dibromomethane	ND	0.42	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,1-Dichloroethane	ND	0.28	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,1-Dichloroethene	ND	0.41	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
2-Hexanone	ND	3.1	20		µg/L	2	5/22/2019 10:31:53 PM	R60108
Isopropylbenzene	3.7	0.38	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
4-Isopropyltoluene	ND	0.43	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	5/22/2019 10:31:53 PM	R60108
Methylene Chloride	ND	0.31	6.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
n-Butylbenzene	1.9	0.46	6.0	J	µg/L	2	5/22/2019 10:31:53 PM	R60108
n-Propylbenzene	5.4	0.43	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
sec-Butylbenzene	2.4	0.50	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 12:00:00 PM
Lab ID: 1905866-004 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.38	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
tert-Butylbenzene	ND	0.41	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,1,2-Trichloroethane	ND	0.43	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Trichloroethene (TCE)	ND	0.33	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Vinyl chloride	ND	0.36	2.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Xylenes, Total	ND	0.91	3.0		µg/L	2	5/22/2019 10:31:53 PM	R60108
Surr: 1,2-Dichloroethane-d4	86.5	0	70-130		%Rec	2	5/22/2019 10:31:53 PM	R60108
Surr: 4-Bromofluorobenzene	94.0	0	70-130		%Rec	2	5/22/2019 10:31:53 PM	R60108
Surr: Dibromofluoromethane	97.3	0	70-130		%Rec	2	5/22/2019 10:31:53 PM	R60108
Surr: Toluene-d8	86.1	0	70-130		%Rec	2	5/22/2019 10:31:53 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.69	0.061	0.10		mg/L	2	5/22/2019 10:31:53 PM	G60108
Surr: BFB	98.9	0	70-130		%Rec	2	5/22/2019 10:31:53 PM	G60108

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:50:00 AM
Lab ID: 1905866-005
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	5/22/2019 4:56:17 AM	45060
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.6	0.35	1.0		mg/L	1	5/21/2019 3:56:26 AM	45003
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2019 3:56:26 AM	45003
Surr: DNOP	75.0	0	70-130		%Rec	1	5/21/2019 3:56:26 AM	45003
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.64	0.25	0.50		mg/L	5	5/28/2019 11:52:19 AM	R6022C
Chloride	250	1.2	10		mg/L	20	5/16/2019 9:26:55 PM	R59923
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/16/2019 9:14:31 PM	R59923
Bromide	0.95	0.089	0.50		mg/L	5	5/16/2019 9:14:31 PM	R59923
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/16/2019 9:14:31 PM	R59923
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/16/2019 9:14:31 PM	R59923
Sulfate	80	0.27	2.5		mg/L	5	5/16/2019 9:14:31 PM	R59923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.077	0.0025	0.020		mg/L	1	5/24/2019 9:52:10 PM	E60186
Barium	0.38	0.00065	0.0020		mg/L	1	5/24/2019 9:52:10 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:52:10 PM	E60186
Boron	0.24	0.0045	0.040		mg/L	1	5/24/2019 9:52:10 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:52:10 PM	E60186
Calcium	170	0.31	5.0		mg/L	5	5/24/2019 9:54:11 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:52:10 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:52:10 PM	E60186
Copper	0.0039	0.0013	0.0060	J	mg/L	1	5/24/2019 9:52:10 PM	E60186
Iron	3.6	0.044	0.10	*	mg/L	5	5/24/2019 9:54:11 PM	E60186
Magnesium	47	0.050	1.0		mg/L	1	5/24/2019 9:52:10 PM	E60186
Manganese	3.3	0.0014	0.010	*	mg/L	5	5/24/2019 9:54:11 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:52:10 PM	E60186
Nickel	0.0067	0.0040	0.010	J	mg/L	1	5/24/2019 9:52:10 PM	E60186
Potassium	0.35	0.16	1.0	J	mg/L	1	5/24/2019 9:52:10 PM	E60186
Silver	0.0026	0.00094	0.0050	J	mg/L	1	5/24/2019 9:52:10 PM	E60186
Sodium	180	2.1	5.0		mg/L	5	5/24/2019 9:54:11 PM	E60186
Zinc	0.018	0.0023	0.010		mg/L	1	5/24/2019 9:52:10 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.5	0.012	0.10	*	mg/L	5	5/30/2019 10:54:47 PM	45221
Barium	0.32	0.00065	0.0020		mg/L	1	5/30/2019 10:52:45 PM	45221
Beryllium	0.00043	0.00028	0.0020	J	mg/L	1	5/30/2019 10:52:45 PM	45221
Boron	0.23	0.0045	0.040		mg/L	1	5/30/2019 10:52:45 PM	45221

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:50:00 AM
Lab ID: 1905866-005
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 10:52:45 PM	45221
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 10:52:45 PM	45221
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 10:52:45 PM	45221
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 10:52:45 PM	45221
Iron	4.5	0.044	0.10	*	mg/L	5	5/30/2019 10:54:47 PM	45221
Manganese	3.7	0.0014	0.010	*	mg/L	5	5/30/2019 10:54:47 PM	45221
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 10:52:45 PM	45221
Nickel	0.0058	0.0040	0.010	J	mg/L	1	5/30/2019 10:52:45 PM	45221
Silver	0.0022	0.0014	0.0050	J	mg/L	1	5/30/2019 10:52:45 PM	45221
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 10:52:45 PM	45221
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 9:34:41 PM	B60214
Arsenic	0.00040	0.00010	0.0010	J	mg/L	1	5/24/2019 12:41:41 AM	D60134
Lead	0.00031	0.000055	0.00050	J	mg/L	1	5/24/2019 12:41:41 AM	D60134
Selenium	ND	0.00017	0.0010		mg/L	1	5/24/2019 12:41:41 AM	D60134
Thallium	ND	0.000048	0.00050		mg/L	1	5/24/2019 12:41:41 AM	D60134
Uranium	0.0032	0.000075	0.00050		mg/L	1	5/24/2019 12:41:41 AM	D60134
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 6:11:51 PM	45221
Arsenic	0.0011	0.00031	0.0010		mg/L	1	5/29/2019 6:11:51 PM	45221
Lead	0.0039	0.000055	0.00050		mg/L	1	5/29/2019 6:11:51 PM	45221
Selenium	0.00064	0.00048	0.0010	J	mg/L	1	5/29/2019 6:11:51 PM	45221
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 6:11:51 PM	45221
Uranium	0.0038	0.000085	0.00050		mg/L	1	5/29/2019 6:11:51 PM	45221
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/24/2019 11:30:40 AM	45169
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Aniline	ND	3.6	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 7:53:43 PM	45061

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PQL	Practical Quanitative Limit
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:50:00 AM
Lab ID: 1905866-005 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 7:53:43 PM	45061
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Bis(2-ethylhexyl)phthalate	4.3	4.3	10	J	µg/L	1	5/24/2019 7:53:43 PM	45061
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 7:53:43 PM	45061
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 7:53:43 PM	45061
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 7:53:43 PM	45061
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 7:53:43 PM	45061
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 7:53:43 PM	45061
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 7:53:43 PM	45061
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 7:53:43 PM	45061
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 7:53:43 PM	45061
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Fluorene	ND	2.9	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:50:00 AM
Lab ID: 1905866-005
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 7:53:43 PM	45061
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 7:53:43 PM	45061
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 7:53:43 PM	45061
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Naphthalene	ND	4.1	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 7:53:43 PM	45061
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 7:53:43 PM	45061
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 7:53:43 PM	45061
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Phenol	ND	8.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 7:53:43 PM	45061
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 7:53:43 PM	45061
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 7:53:43 PM	45061
Surr: 2-Fluorophenol	57.4	0	15-101		%Rec	1	5/24/2019 7:53:43 PM	45061
Surr: Phenol-d5	39.4	0	15-84.6		%Rec	1	5/24/2019 7:53:43 PM	45061
Surr: 2,4,6-Tribromophenol	83.6	0	27.8-112		%Rec	1	5/24/2019 7:53:43 PM	45061
Surr: Nitrobenzene-d5	96.6	0	33-113		%Rec	1	5/24/2019 7:53:43 PM	45061
Surr: 2-Fluorobiphenyl	80.5	0	26.6-107		%Rec	1	5/24/2019 7:53:43 PM	45061
Surr: 4-Terphenyl-d14	81.4	0	18.7-148		%Rec	1	5/24/2019 7:53:43 PM	45061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	14	0.17	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Ethylbenzene	2.4	0.13	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Methyl tert-butyl ether (MTBE)	42	0.46	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2,4-Trimethylbenzene	0.25	0.21	1.0	J	µg/L	1	5/22/2019 11:00:30 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Naphthalene	ND	0.28	2.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1-Methylnaphthalene	0.50	0.31	4.0	J	µg/L	1	5/22/2019 11:00:30 PM	R60108

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Qualifiers:

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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:50:00 AM
Lab ID: 1905866-005 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Acetone	ND	1.2	10		µg/L	1	5/22/2019 11:00:30 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 11:00:30 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 11:00:30 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Chlorobenzene	0.35	0.19	1.0	J	µg/L	1	5/22/2019 11:00:30 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Chloroform	ND	0.12	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,4-Dichlorobenzene	4.7	0.29	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 11:00:30 PM	R60108
Isopropylbenzene	0.67	0.19	1.0	J	µg/L	1	5/22/2019 11:00:30 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 11:00:30 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
n-Propylbenzene	0.54	0.21	1.0	J	µg/L	1	5/22/2019 11:00:30 PM	R60108
sec-Butylbenzene	1.3	0.25	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:50:00 AM
Lab ID: 1905866-005 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 11:00:30 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 11:00:30 PM	R60108
Surr: 1,2-Dichloroethane-d4	87.3	0	70-130		%Rec	1	5/22/2019 11:00:30 PM	R60108
Surr: 4-Bromofluorobenzene	86.4	0	70-130		%Rec	1	5/22/2019 11:00:30 PM	R60108
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	1	5/22/2019 11:00:30 PM	R60108
Surr: Toluene-d8	86.8	0	70-130		%Rec	1	5/22/2019 11:00:30 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.57	0.031	0.050		mg/L	1	5/22/2019 11:00:30 PM	G60108
Surr: BFB	99.8	0	70-130		%Rec	1	5/22/2019 11:00:30 PM	G60108

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:56:00 AM
Lab ID: 1905866-006
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	5/22/2019 5:11:17 AM	45060
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.83	0.35	1.0	J	mg/L	1	5/21/2019 4:20:20 AM	45003
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2019 4:20:20 AM	45003
Surr: DNOP	94.3	0	70-130		%Rec	1	5/21/2019 4:20:20 AM	45003
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.63	0.25	0.50		mg/L	5	5/28/2019 12:04:44 PM	R60220
Chloride	260	1.2	10		mg/L	20	5/16/2019 10:16:34 PM	R59923
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/16/2019 10:04:10 PM	R59923
Bromide	0.94	0.089	0.50		mg/L	5	5/16/2019 10:04:10 PM	R59923
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/16/2019 10:04:10 PM	R59923
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/16/2019 10:04:10 PM	R59923
Sulfate	84	0.27	2.5		mg/L	5	5/16/2019 10:04:10 PM	R59923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.034	0.0025	0.020		mg/L	1	5/24/2019 9:56:36 PM	E60186
Barium	0.42	0.00065	0.0020		mg/L	1	5/24/2019 9:56:36 PM	E60186
Beryllium	ND	0.00028	0.0020		mg/L	1	5/24/2019 9:56:36 PM	E60186
Boron	0.24	0.0045	0.040		mg/L	1	5/24/2019 9:56:36 PM	E60186
Cadmium	ND	0.00055	0.0020		mg/L	1	5/24/2019 9:56:36 PM	E60186
Calcium	170	0.31	5.0		mg/L	5	5/24/2019 9:58:40 PM	E60186
Chromium	ND	0.0015	0.0060		mg/L	1	5/24/2019 9:56:36 PM	E60186
Cobalt	ND	0.0031	0.0060		mg/L	1	5/24/2019 9:56:36 PM	E60186
Copper	0.0072	0.0013	0.0060		mg/L	1	5/24/2019 9:56:36 PM	E60186
Iron	3.6	0.044	0.10	*	mg/L	5	5/24/2019 9:58:40 PM	E60186
Magnesium	47	0.050	1.0		mg/L	1	5/24/2019 9:56:36 PM	E60186
Manganese	3.3	0.0014	0.010	*	mg/L	5	5/24/2019 9:58:40 PM	E60186
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/24/2019 9:56:36 PM	E60186
Nickel	0.0076	0.0040	0.010	J	mg/L	1	5/24/2019 9:56:36 PM	E60186
Potassium	0.41	0.16	1.0	J	mg/L	1	5/24/2019 9:56:36 PM	E60186
Silver	0.0029	0.00094	0.0050	J	mg/L	1	5/24/2019 9:56:36 PM	E60186
Sodium	180	2.1	5.0		mg/L	5	5/24/2019 9:58:40 PM	E60186
Zinc	0.013	0.0023	0.010		mg/L	1	5/24/2019 9:56:36 PM	E60186
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.8	0.012	0.10	*	mg/L	5	5/30/2019 10:59:13 PM	45221
Barium	0.32	0.00065	0.0020		mg/L	1	5/30/2019 10:57:11 PM	45221
Beryllium	0.00053	0.00028	0.0020	J	mg/L	1	5/30/2019 10:57:11 PM	45221
Boron	0.23	0.0045	0.040		mg/L	1	5/30/2019 10:57:11 PM	45221

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:56:00 AM
Lab ID: 1905866-006
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	5/30/2019 10:57:11 PM	45221
Chromium	ND	0.0015	0.0060		mg/L	1	5/30/2019 10:57:11 PM	45221
Cobalt	ND	0.0031	0.0060		mg/L	1	5/30/2019 10:57:11 PM	45221
Copper	ND	0.0041	0.0060		mg/L	1	5/30/2019 10:57:11 PM	45221
Iron	4.8	0.044	0.10	*	mg/L	5	5/30/2019 10:59:13 PM	45221
Manganese	4.0	0.0014	0.010	*	mg/L	5	5/30/2019 10:59:13 PM	45221
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/30/2019 10:57:11 PM	45221
Nickel	0.0093	0.0040	0.010	J	mg/L	1	5/30/2019 10:57:11 PM	45221
Silver	0.0026	0.0014	0.0050	J	mg/L	1	5/30/2019 10:57:11 PM	45221
Zinc	ND	0.0058	0.010		mg/L	1	5/30/2019 10:57:11 PM	45221
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/28/2019 9:51:00 PM	C60214
Arsenic	0.00040	0.00010	0.0010	J	mg/L	1	5/24/2019 12:44:24 AM	D60134
Lead	0.00025	0.000055	0.00050	J	mg/L	1	5/24/2019 12:44:24 AM	D60134
Selenium	ND	0.00017	0.0010		mg/L	1	5/24/2019 12:44:24 AM	D60134
Thallium	ND	0.000048	0.00050		mg/L	1	5/24/2019 12:44:24 AM	D60134
Uranium	0.0031	0.000075	0.00050		mg/L	1	5/24/2019 12:44:24 AM	D60134
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/29/2019 6:14:02 PM	45221
Arsenic	0.0011	0.00031	0.0010		mg/L	1	5/29/2019 6:14:02 PM	45221
Lead	0.0051	0.000055	0.00050		mg/L	1	5/29/2019 6:14:02 PM	45221
Selenium	0.00088	0.00048	0.0010	J	mg/L	1	5/29/2019 6:14:02 PM	45221
Thallium	ND	0.000052	0.00050		mg/L	1	5/29/2019 6:14:02 PM	45221
Uranium	0.0042	0.000085	0.00050		mg/L	1	5/29/2019 6:14:02 PM	45221
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	5/24/2019 11:38:40 AM	45169
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Acenaphthylene	ND	2.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Aniline	ND	3.6	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Anthracene	ND	2.7	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Azobenzene	ND	3.3	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/24/2019 8:23:42 PM	45061

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:56:00 AM
Lab ID: 1905866-006
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	11	20		µg/L	1	5/24/2019 8:23:42 PM	45061
Benzyl alcohol	ND	2.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/24/2019 8:23:42 PM	45061
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Carbazole	ND	2.9	10		µg/L	1	5/24/2019 8:23:42 PM	45061
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
4-Chloroaniline	ND	2.3	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2-Chlorophenol	ND	2.7	10		µg/L	1	5/24/2019 8:23:42 PM	45061
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Chrysene	ND	2.8	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Dibenzofuran	ND	3.2	10		µg/L	1	5/24/2019 8:23:42 PM	45061
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/24/2019 8:23:42 PM	45061
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/24/2019 8:23:42 PM	45061
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Diethyl phthalate	ND	2.9	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/24/2019 8:23:42 PM	45061
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/24/2019 8:23:42 PM	45061
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/24/2019 8:23:42 PM	45061
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Fluoranthene	ND	2.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Fluorene	ND	2.9	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Hexachloroethane	ND	4.8	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Isophorone	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:56:00 AM
Lab ID: 1905866-006
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2-Methylphenol	ND	2.9	10		µg/L	1	5/24/2019 8:23:42 PM	45061
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/24/2019 8:23:42 PM	45061
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/24/2019 8:23:42 PM	45061
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Naphthalene	ND	4.1	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 8:23:42 PM	45061
3-Nitroaniline	ND	3.2	10		µg/L	1	5/24/2019 8:23:42 PM	45061
4-Nitroaniline	ND	2.7	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Nitrobenzene	ND	2.8	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2-Nitrophenol	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
4-Nitrophenol	ND	7.6	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Pentachlorophenol	ND	2.7	20		µg/L	1	5/24/2019 8:23:42 PM	45061
Phenanthrene	ND	2.8	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Phenol	ND	8.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Pyrene	ND	2.5	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Pyridine	ND	9.6	10		µg/L	1	5/24/2019 8:23:42 PM	45061
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/24/2019 8:23:42 PM	45061
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/24/2019 8:23:42 PM	45061
Surr: 2-Fluorophenol	54.9	0	15-101		%Rec	1	5/24/2019 8:23:42 PM	45061
Surr: Phenol-d5	35.7	0	15-84.6		%Rec	1	5/24/2019 8:23:42 PM	45061
Surr: 2,4,6-Tribromophenol	78.6	0	27.8-112		%Rec	1	5/24/2019 8:23:42 PM	45061
Surr: Nitrobenzene-d5	84.7	0	33-113		%Rec	1	5/24/2019 8:23:42 PM	45061
Surr: 2-Fluorobiphenyl	78.5	0	26.6-107		%Rec	1	5/24/2019 8:23:42 PM	45061
Surr: 4-Terphenyl-d14	77.9	0	18.7-148		%Rec	1	5/24/2019 8:23:42 PM	45061
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	19	0.17	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Toluene	ND	0.35	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Ethylbenzene	2.5	0.13	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Methyl tert-butyl ether (MTBE)	40	0.46	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2,4-Trimethylbenzene	0.26	0.21	1.0	J	µg/L	1	5/22/2019 11:29:06 PM	R60108
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Naphthalene	ND	0.28	2.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/22/2019 11:29:06 PM	R60108

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:56:00 AM
Lab ID: 1905866-006
Matrix: AQUEOUS
Received Date: 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Acetone	ND	1.2	10		µg/L	1	5/22/2019 11:29:06 PM	R60108
Bromobenzene	ND	0.24	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Bromoform	ND	0.29	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Bromomethane	ND	0.27	3.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
2-Butanone	ND	2.1	10		µg/L	1	5/22/2019 11:29:06 PM	R60108
Carbon disulfide	ND	0.45	10		µg/L	1	5/22/2019 11:29:06 PM	R60108
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Chlorobenzene	0.39	0.19	1.0	J	µg/L	1	5/22/2019 11:29:06 PM	R60108
Chloroethane	ND	0.18	2.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Chloroform	ND	0.12	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Chloromethane	ND	0.32	3.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Dibromomethane	ND	0.21	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,4-Dichlorobenzene	4.9	0.29	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
2-Hexanone	ND	1.5	10		µg/L	1	5/22/2019 11:29:06 PM	R60108
Isopropylbenzene	0.67	0.19	1.0	J	µg/L	1	5/22/2019 11:29:06 PM	R60108
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/22/2019 11:29:06 PM	R60108
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
n-Propylbenzene	0.63	0.21	1.0	J	µg/L	1	5/22/2019 11:29:06 PM	R60108
sec-Butylbenzene	1.3	0.25	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/16/2019 10:56:00 AM
Lab ID: 1905866-006 **Matrix:** AQUEOUS **Received Date:** 5/16/2019 4:01:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Styrene	ND	0.19	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/22/2019 11:29:06 PM	R60108
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/22/2019 11:29:06 PM	R60108
Surr: 1,2-Dichloroethane-d4	87.5	0	70-130		%Rec	1	5/22/2019 11:29:06 PM	R60108
Surr: 4-Bromofluorobenzene	85.4	0	70-130		%Rec	1	5/22/2019 11:29:06 PM	R60108
Surr: Dibromofluoromethane	98.4	0	70-130		%Rec	1	5/22/2019 11:29:06 PM	R60108
Surr: Toluene-d8	86.5	0	70-130		%Rec	1	5/22/2019 11:29:06 PM	R60108
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	0.59	0.031	0.050		mg/L	1	5/22/2019 11:29:06 PM	G60108
Surr: BFB	97.9	0	70-130		%Rec	1	5/22/2019 11:29:06 PM	G60108

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45221** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **45221** RunNo: **60262**

Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036581** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0053	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	0.0019	0.0060								J
Cobalt	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	0.0028	0.0050								J
Zinc	ND	0.010								

Sample ID: **LLLCS-45221** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **45221** RunNo: **60262**

Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036583** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	126	50	150			J
Barium	0.0029	0.0020	0.002000	0	146	50	150			
Beryllium	0.0022	0.0020	0.002000	0	112	50	150			
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0025	0.0020	0.002000	0	124	50	150			
Chromium	0.0075	0.0060	0.006000	0	126	50	150			
Cobalt	0.0035	0.0060	0.006000	0	58.9	50	150			J
Iron	0.025	0.020	0.02000	0	127	50	150			
Manganese	0.0023	0.0020	0.002000	0	115	50	150			
Molybdenum	0.0064	0.0080	0.008000	0	80.1	50	150			J
Nickel	0.0030	0.010	0.005000	0	59.5	50	150			J
Silver	0.0066	0.0050	0.005000	0	132	50	150			
Zinc	0.011	0.010	0.01000	0	110	50	150			

Sample ID: **LCS-45221** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **45221** RunNo: **60262**

Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.44	0.020	0.5000	0	88.0	85	115			
Barium	0.43	0.0020	0.5000	0	86.3	85	115			

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45221** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45221** RunNo: **60262**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.44	0.0020	0.5000	0	88.0	85	115			
Boron	0.43	0.040	0.5000	0	85.1	85	115			
Cadmium	0.44	0.0020	0.5000	0	87.8	85	115			
Chromium	0.44	0.0060	0.5000	0	87.9	85	115			
Cobalt	0.44	0.0060	0.5000	0	87.9	85	115			
Iron	0.45	0.020	0.5000	0	89.6	85	115			
Manganese	0.44	0.0020	0.5000	0	88.9	85	115			
Molybdenum	0.43	0.0080	0.5000	0	86.4	85	115			
Nickel	0.44	0.010	0.5000	0	87.5	85	115			
Silver	0.089	0.0050	0.1000	0	88.8	85	115			
Zinc	0.43	0.010	0.5000	0	86.5	85	115			

Sample ID: **MB-45221** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45221** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037789** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0078	0.020	0.01000	0	77.6	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.2	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS-45221** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037789** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0020	0.0020	0.002000	0	97.7	50	150			J
Chromium	0.0055	0.0060	0.006000	0	92.4	50	150			J
Cobalt	0.0065	0.0060	0.006000	0	109	50	150			
Copper	0.0064	0.0060	0.006000	0	106	50	150			
Iron	0.025	0.020	0.02000	0	126	50	150			
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Molybdenum	0.0093	0.0080	0.008000	0	116	50	150			
Nickel	0.0042	0.010	0.005000	0	85.0	50	150			J
Silver	0.0053	0.0050	0.005000	0	107	50	150			
Zinc	0.0095	0.010	0.01000	0	95.4	50	150			J

Sample ID: **LCS-45221** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45221** RunNo: **60292**
Prep Date: **5/28/2019** Analysis Date: **5/30/2019** SeqNo: **2037790** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.7	85	115			
Barium	0.47	0.0020	0.5000	0	93.8	85	115			
Beryllium	0.47	0.0020	0.5000	0	94.1	85	115			
Boron	0.48	0.040	0.5000	0	95.5	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.1	85	115			
Chromium	0.47	0.0060	0.5000	0	94.6	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.5	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.46	0.020	0.5000	0	92.8	85	115			
Manganese	0.47	0.0020	0.5000	0	94.4	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.2	85	115			
Nickel	0.47	0.010	0.5000	0	94.6	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.46	0.010	0.5000	0	92.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-E**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0035	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	117	50	150			J
Barium	0.0016	0.0020	0.002000	0	80.4	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	95.4	50	150			J
Boron	0.039	0.040	0.04000	0	97.9	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	107	50	150			
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.6	50	150			J
Cobalt	0.0057	0.0060	0.006000	0	94.3	50	150			J
Copper	0.0051	0.0060	0.006000	0	85.0	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0051	0.010	0.005000	0	102	50	150			J
Potassium	0.51	1.0	0.5000	0	103	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0052	0.0050	0.005000	0	104	50	150			
Sodium	0.61	1.0	0.5000	0	121	50	150			J
Zinc	0.0046	0.010	0.005000	0	91.7	50	150			J

Sample ID: **LCS-E**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **E60186**	RunNo: **60186**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2033213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			
Barium	0.48	0.0020	0.5000	0	95.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.1	85	115			
Boron	0.49	0.040	0.5000	0	98.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.3	85	115			
Iron	0.48	0.020	0.5000	0	96.9	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.4	85	115			
Nickel	0.47	0.010	0.5000	0	94.2	85	115			
Potassium	50	1.0	50.00	0	99.5	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45221** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45221** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45221** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45221** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00087	0.0010	0.001000	0	86.6	50	150			J
Arsenic	0.00093	0.0010	0.001000	0	92.8	50	150			J
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00078	0.0010	0.001000	0	78.2	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	92.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.1	50	150			J

Sample ID: **MSLCS-45221** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45221** RunNo: **60260**
Prep Date: **5/28/2019** Analysis Date: **5/29/2019** SeqNo: **2036410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	100	85	115			
Arsenic	0.026	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.027	0.0010	0.02500	0	108	85	115			
Thallium	0.013	0.00050	0.01250	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D60134** RunNo: **60134**
Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	0.00012	0.00050								J

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **D60134** RunNo: **60134**
Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030985** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00093	0.0010	0.001000	0	92.7	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00094	0.0010	0.001000	0	93.7	50	150			J
Thallium	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.6	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **D60134** RunNo: **60134**
Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030986** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.9	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.023	0.0010	0.02500	0	93.2	85	115			
Thallium	0.013	0.00050	0.01250	0	101	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60214** RunNo: **60214**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60214** RunNo: **60214**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034590** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034590** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00083	0.0010	0.001000	0	82.6	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034591** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.6	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034624** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00085	0.0010	0.001000	0	84.7	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C60214**	RunNo: **60214**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034625** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45169**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **45169**	RunNo: **60151**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2031890** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-45169**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **45169**	RunNo: **60151**
Prep Date: **5/23/2019**	Analysis Date: **5/24/2019**	SeqNo: **2031891** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.3	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R59923** RunNo: **59923**
Prep Date: Analysis Date: **5/16/2019** SeqNo: **2023490** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R59923** RunNo: **59923**
Prep Date: Analysis Date: **5/16/2019** SeqNo: **2023491** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.56	0.10	0.5000	0	113	90	110			S
Chloride	4.8	0.50	5.000	0	96.5	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.8	90	110			
Bromide	2.4	0.10	2.500	0	97.7	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.7	90	110			
Sulfate	9.9	0.50	10.00	0	98.8	90	110			

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R60220** RunNo: **60220**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034766** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R60220** RunNo: **60220**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45060** SampType: **MBLK** TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW** Batch ID: **45060** RunNo: **60072**
Prep Date: **5/21/2019** Analysis Date: **5/21/2019** SeqNo: **2028596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-45060** SampType: **LCS** TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW** Batch ID: **45060** RunNo: **60072**
Prep Date: **5/21/2019** Analysis Date: **5/21/2019** SeqNo: **2028598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.096	0.010	0.1000	0	96.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45003**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**							
Client ID: **LCSW**	Batch ID: **45003**	RunNo: **59994**							
Prep Date: **5/17/2019**	Analysis Date: **5/21/2019**	SeqNo: **2025445**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	107	71.8	135			
Surr: DNOP	0.54		0.5000		109	70	130			

Sample ID: **MB-45003**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**							
Client ID: **PBW**	Batch ID: **45003**	RunNo: **60017**							
Prep Date: **5/17/2019**	Analysis Date: **5/21/2019**	SeqNo: **2025611**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		95.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R60108** RunNo: **60108**

Prep Date: Analysis Date: **5/22/2019** SeqNo: **2030408** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.5	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.0	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.5	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.8	70	130			
Surr: Toluene-d8	8.6		10.00		85.9	70	130			

Sample ID: **1905866-005a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-35** Batch ID: **R60108** RunNo: **60108**

Prep Date: Analysis Date: **5/22/2019** SeqNo: **2030423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	33	1.0	20.00	13.69	95.2	70	130			
Toluene	19	1.0	20.00	0	95.9	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.8	67.6	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.0	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		82.8	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	8.4		10.00		83.7	70	130			

Sample ID: **1905866-005a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-35** Batch ID: **R60108** RunNo: **60108**

Prep Date: Analysis Date: **5/23/2019** SeqNo: **2030424** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	31	1.0	20.00	13.69	86.1	70	130	5.67	20	
Toluene	18	1.0	20.00	0	89.8	70	130	6.64	20	
Chlorobenzene	18	1.0	20.00	0	92.2	70	130	8.13	20	
1,1-Dichloroethene	19	1.0	20.00	0	93.5	67.6	130	5.51	20	
Trichloroethene (TCE)	17	1.0	20.00	0	87.5	70	130	1.63	20	
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.6		10.00		86.3	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		99.5	70	130	0	0	
Surr: Toluene-d8	8.4		10.00		84.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R60108** RunNo: **60108**
Prep Date: Analysis Date: **5/22/2019** SeqNo: **2030441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.16	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.0		10.00		80.2	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.1	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.1	70	130			
Surr: Toluene-d8	8.8		10.00		88.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **mb-45061** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **45061** RunNo: **60170**
Prep Date: **5/21/2019** Analysis Date: **5/24/2019** SeqNo: **2032383** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	4.7	10								J
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **mb-45061** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **45061** RunNo: **60170**
Prep Date: **5/21/2019** Analysis Date: **5/24/2019** SeqNo: **2032383** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		79.8	15	101			
Surr: Phenol-d5	140		200.0		71.7	15	84.6			
Surr: 2,4,6-Tribromophenol	180		200.0		90.4	27.8	112			
Surr: Nitrobenzene-d5	92		100.0		92.3	33	113			
Surr: 2-Fluorobiphenyl	71		100.0		71.3	26.6	107			
Surr: 4-Terphenyl-d14	89		100.0		89.1	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**
05-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **lcs-45061** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **45061** RunNo: **60170**
Prep Date: **5/21/2019** Analysis Date: **5/24/2019** SeqNo: **2042866** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	110	10	100.0	0	105	32.2	94			S
4-Chloro-3-methylphenol	120	10	100.0	0	121	37.7	101			S
2-Chlorophenol	110	10	100.0	0	106	32.6	90.1			S
1,4-Dichlorobenzene	86	10	100.0	0	86.1	30	87.2			
2,4-Dinitrotoluene	110	10	100.0	0	112	35.9	85.8			S
N-Nitrosodi-n-propylamine	100	10	100.0	0	101	37.1	108			
4-Nitrophenol	83	10	100.0	0	83.1	22.4	86.6			
Pentachlorophenol	91	20	100.0	0	91.4	31.6	91			S
Phenol	85	10	100.0	0	85.1	21.7	84.9			S
Pyrene	100	10	100.0	0	103	46.3	103			S
1,2,4-Trichlorobenzene	100	10	100.0	0	101	30.2	88.3			S
Surr: 2-Fluorophenol	91		100.0		90.8	15	101			
Surr: Phenol-d5	85		100.0		84.6	15	84.6			S
Surr: 2,4,6-Tribromophenol	110		100.0		111	27.8	112			
Surr: Nitrobenzene-d5	120		100.0		116	33	113			S
Surr: 2-Fluorobiphenyl	110		100.0		109	26.6	107			S
Surr: 4-Terphenyl-d14	120		100.0		120	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905866**

05-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **1905866-005A MS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-35**	Batch ID: **G60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/23/2019**	SeqNo: **2030452** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.93	0.050	0.5000	0.5664	73.4	70	130			
Surr: BFB	9.7		10.00		96.6	70	130			

Sample ID: **1905866-005A MSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-35**	Batch ID: **G60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/23/2019**	SeqNo: **2030453** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.89	0.050	0.5000	0.5664	65.6	70	130	4.25	20	S
Surr: BFB	9.9		10.00		99.0	70	130	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030457** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.1	70	130			
Surr: BFB	9.8		10.00		98.3	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60108**	RunNo: **60108**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030458** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.9		10.00		99.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905866** RcptNo: 1

Received By: **Erin Melendrez** **5/16/2019 4:01:00 PM**

Completed By: **Erin Melendrez** **5/16/2019 4:09:03 PM**

Reviewed By: 5/16/19 VVZ
LB: ENM 5/16/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
Adjusted? NO

Checked by: ENM 5/16/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	9.7	Good	Not Present			
2	4.9	Good	Not Present			

Chain-of-Custody Record

Client:	MARATHON - WESTERN REFINING SW
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road, Gallup, NM 87301
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard X Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other_____
☐ EDD (Type)	_____

Turn-Around Time: X Standard ☐ Rush_____

Project Name: 2019 2ND QTR GW SAMPLES

Project #: OW-57, MKTF-

Project Manager: Brian Moore

Sampler: C. JOHNSON (CAJohnson1@marathonpetroleum.com)

On Ice: ☐ Yes ☐ No

Sample Temperature: 4.6+0.1(CF)=9.7°C 4.8+0.1(CF)=4.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905860	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS		8011 FOR EDB					Air Bubbles (Y or N)
5/16/2019	700	aqueous	FIELD BLANK	3-40ML VOAS	HCL	-001	X												
5/16/2019	700	aqueous	TRIP BLANK	3-40ML VOAS	HCL	-002	X												
5/16/2019	925	aqueous	OW-57	Misc	Misc	-003	X	X	X	X	X	X							
5/16/2019	1200	aqueous	MKTF-18	Misc	Misc	-004	X	X	X	X	X	X		X					
5/16/2019	1050	aqueous	MKTF-35	Misc	Misc	-005	X	X	X	X	X	X		X					
5/16/2019	1056	aqueous	DUPLICATE	Misc	Misc	-006	X	X	X	X	X	X		X					

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/16/19	1400			5/16/19	1410
5/16/19	1601			5/16/19	1601

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 10, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 2ND QTR GW Samples OrderNo.: 1905B47

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/22/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 7:00:00 AM
Lab ID: 1905B47-001
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Toluene	ND	0.35	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Naphthalene	ND	0.28	2.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Acetone	ND	1.2	10		µg/L	1	5/28/2019 5:41:00 PM	R60205
Bromobenzene	ND	0.24	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Bromoform	ND	0.29	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Bromomethane	ND	0.27	3.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
2-Butanone	ND	2.1	10		µg/L	1	5/28/2019 5:41:00 PM	R60205
Carbon disulfide	ND	0.45	10		µg/L	1	5/28/2019 5:41:00 PM	R60205
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Chloroethane	ND	0.18	2.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Chloroform	ND	0.12	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Chloromethane	ND	0.32	3.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Dibromomethane	ND	0.21	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/28/2019 5:41:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 7:00:00 AM
Lab ID: 1905B47-001
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
2-Hexanone	ND	1.5	10		µg/L	1	5/28/2019 5:41:00 PM	R60205
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/28/2019 5:41:00 PM	R60205
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Styrene	ND	0.19	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/28/2019 5:41:00 PM	R60205
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/28/2019 5:41:00 PM	R60205
Surr: 1,2-Dichloroethane-d4	118	0	70-130		%Rec	1	5/28/2019 5:41:00 PM	R60205
Surr: 4-Bromofluorobenzene	96.3	0	70-130		%Rec	1	5/28/2019 5:41:00 PM	R60205
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/28/2019 5:41:00 PM	R60205
Surr: Toluene-d8	93.2	0	70-130		%Rec	1	5/28/2019 5:41:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 7:00:00 AM
Lab ID: 1905B47-002
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Toluene	ND	0.35	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Naphthalene	ND	0.28	2.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Acetone	3.2	1.2	10	J	µg/L	1	5/28/2019 6:04:00 PM	R60205
Bromobenzene	ND	0.24	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Bromoform	ND	0.29	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Bromomethane	ND	0.27	3.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
2-Butanone	ND	2.1	10		µg/L	1	5/28/2019 6:04:00 PM	R60205
Carbon disulfide	ND	0.45	10		µg/L	1	5/28/2019 6:04:00 PM	R60205
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Chlorobenzene	1.2	0.19	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Chloroethane	ND	0.18	2.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Chloroform	ND	0.12	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Chloromethane	ND	0.32	3.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Dibromomethane	ND	0.21	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/28/2019 6:04:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 7:00:00 AM
Lab ID: 1905B47-002 **Matrix:** AQUEOUS **Received Date:** 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
2-Hexanone	ND	1.5	10		µg/L	1	5/28/2019 6:04:00 PM	R60205
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/28/2019 6:04:00 PM	R60205
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Styrene	ND	0.19	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/28/2019 6:04:00 PM	R60205
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/28/2019 6:04:00 PM	R60205
Surr: 1,2-Dichloroethane-d4	121	0	70-130		%Rec	1	5/28/2019 6:04:00 PM	R60205
Surr: 4-Bromofluorobenzene	98.9	0	70-130		%Rec	1	5/28/2019 6:04:00 PM	R60205
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/28/2019 6:04:00 PM	R60205
Surr: Toluene-d8	109	0	70-130		%Rec	1	5/28/2019 6:04:00 PM	R60205

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 12:24:00 PM
Lab ID: 1905B47-003
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	6/1/2019 4:04:16 AM	45261
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/24/2019 4:53:25 PM	45173
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/24/2019 4:53:25 PM	45173
Surr: DNOP	106	0	70-130		%Rec	1	5/24/2019 4:53:25 PM	45173
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.027	0.021	0.050	J	mg/L	1	5/24/2019 12:18:58 PM	G60182
Surr: BFB	90.6	0	72.8-125		%Rec	1	5/24/2019 12:18:58 PM	G60182
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/22/2019 11:41:41 PM	R60103
Chloride	1400	6.2	50		mg/L	100	6/3/2019 8:48:35 PM	R60362
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/22/2019 11:41:41 PM	R60103
Bromide	1.0	0.089	0.50		mg/L	5	5/22/2019 11:41:41 PM	R60103
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/22/2019 11:41:41 PM	R60103
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/22/2019 11:41:41 PM	R60103
Sulfate	240	0.27	2.5		mg/L	5	5/22/2019 11:41:41 PM	R60103
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0044	0.0025	0.020	J	mg/L	1	6/3/2019 4:51:01 PM	B60357
Barium	0.096	0.00065	0.0020		mg/L	1	6/3/2019 4:51:01 PM	B60357
Beryllium	0.00030	0.00028	0.0020	J	mg/L	1	6/3/2019 4:51:01 PM	B60357
Boron	0.49	0.0045	0.040		mg/L	1	6/3/2019 4:51:01 PM	B60357
Cadmium	ND	0.00055	0.0020		mg/L	1	6/3/2019 4:51:01 PM	B60357
Calcium	61	0.062	1.0		mg/L	1	6/3/2019 4:51:01 PM	B60357
Chromium	ND	0.0015	0.0060		mg/L	1	6/3/2019 4:51:01 PM	B60357
Cobalt	ND	0.0031	0.0060		mg/L	1	6/3/2019 4:51:01 PM	B60357
Copper	ND	0.0013	0.0060		mg/L	1	6/3/2019 4:51:01 PM	B60357
Iron	0.37	0.0087	0.020	*	mg/L	1	6/3/2019 4:51:01 PM	B60357
Magnesium	7.5	0.050	1.0		mg/L	1	6/3/2019 4:51:01 PM	B60357
Manganese	0.028	0.00029	0.0020		mg/L	1	6/3/2019 4:51:01 PM	B60357
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/3/2019 4:51:01 PM	B60357
Nickel	ND	0.0040	0.010		mg/L	1	6/3/2019 4:51:01 PM	B60357
Potassium	2.9	0.16	1.0		mg/L	1	6/3/2019 4:51:01 PM	B60357
Silver	ND	0.00094	0.0050		mg/L	1	6/3/2019 4:51:01 PM	B60357
Sodium	1100	8.3	20		mg/L	20	6/3/2019 5:56:57 PM	B60357
Zinc	0.038	0.0023	0.010		mg/L	1	6/3/2019 4:51:01 PM	B60357
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	4.2	0.012	0.10	*	mg/L	5	5/31/2019 7:18:42 PM	45289

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 12:24:00 PM
Lab ID: 1905B47-003
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.12	0.00065	0.0020		mg/L	1	5/31/2019 7:16:37 PM	45289
Beryllium	0.00050	0.00028	0.0020	J	mg/L	1	5/31/2019 7:16:37 PM	45289
Boron	0.52	0.0045	0.040		mg/L	1	5/31/2019 7:16:37 PM	45289
Cadmium	ND	0.00074	0.0020		mg/L	1	5/31/2019 7:16:37 PM	45289
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	5/31/2019 7:16:37 PM	45289
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 7:16:37 PM	45289
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2019 7:16:37 PM	45289
Iron	1.1	0.017	0.040	*	mg/L	2	6/3/2019 5:59:15 PM	45289
Manganese	0.046	0.00029	0.0020		mg/L	1	5/31/2019 7:16:37 PM	45289
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 7:16:37 PM	45289
Nickel	ND	0.0040	0.010		mg/L	1	5/31/2019 7:16:37 PM	45289
Silver	ND	0.0014	0.0050		mg/L	1	5/31/2019 7:16:37 PM	45289
Zinc	ND	0.0058	0.010		mg/L	1	5/31/2019 7:16:37 PM	45289
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/4/2019 3:21:06 PM	B60379
Arsenic	0.00035	0.00010	0.0010	J	mg/L	1	6/4/2019 3:21:06 PM	B60379
Lead	ND	0.000055	0.00050		mg/L	1	6/4/2019 3:21:06 PM	B60379
Selenium	0.0019	0.00017	0.0010		mg/L	1	6/4/2019 3:21:06 PM	B60379
Thallium	ND	0.000048	0.00050		mg/L	1	6/4/2019 3:21:06 PM	B60379
Uranium	0.039	0.00037	0.0025	*	mg/L	5	6/6/2019 5:38:07 PM	B60465
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/31/2019 5:49:26 PM	45289
Arsenic	0.00058	0.00031	0.0010	J	mg/L	1	5/31/2019 5:49:26 PM	45289
Lead	0.00090	0.000055	0.00050		mg/L	1	5/31/2019 5:49:26 PM	45289
Selenium	0.0013	0.00048	0.0010		mg/L	1	5/31/2019 5:49:26 PM	45289
Thallium	ND	0.000052	0.00050		mg/L	1	5/31/2019 5:49:26 PM	45289
Uranium	0.043	0.00042	0.0025	*	mg/L	5	6/5/2019 1:14:06 PM	45289
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/4/2019 11:18:42 AM	45339
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Acenaphthylene	ND	2.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Aniline	ND	3.6	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Anthracene	ND	2.7	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Azobenzene	ND	3.3	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/30/2019 4:41:09 PM	45177

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 12:24:00 PM
Lab ID: 1905B47-003
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Benzoic acid	14	11	20	J	µg/L	1	5/30/2019 4:41:09 PM	45177
Benzyl alcohol	ND	2.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/30/2019 4:41:09 PM	45177
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Carbazole	ND	2.9	10		µg/L	1	5/30/2019 4:41:09 PM	45177
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
4-Chloroaniline	ND	2.3	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2-Chlorophenol	ND	2.7	10		µg/L	1	5/30/2019 4:41:09 PM	45177
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Chrysene	ND	2.8	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Dibenzofuran	ND	3.2	10		µg/L	1	5/30/2019 4:41:09 PM	45177
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/30/2019 4:41:09 PM	45177
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/30/2019 4:41:09 PM	45177
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Diethyl phthalate	ND	2.9	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/30/2019 4:41:09 PM	45177
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/30/2019 4:41:09 PM	45177
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/30/2019 4:41:09 PM	45177
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Fluoranthene	ND	2.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Fluorene	ND	2.9	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/30/2019 4:41:09 PM	45177

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 12:24:00 PM
Lab ID: 1905B47-003
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Hexachloroethane	ND	4.8	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Isophorone	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2-Methylphenol	ND	2.9	10		µg/L	1	5/30/2019 4:41:09 PM	45177
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/30/2019 4:41:09 PM	45177
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/30/2019 4:41:09 PM	45177
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Naphthalene	ND	4.1	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2-Nitroaniline	ND	3.2	10		µg/L	1	5/30/2019 4:41:09 PM	45177
3-Nitroaniline	ND	3.2	10		µg/L	1	5/30/2019 4:41:09 PM	45177
4-Nitroaniline	ND	2.7	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Nitrobenzene	ND	2.8	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2-Nitrophenol	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
4-Nitrophenol	ND	7.6	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Pentachlorophenol	ND	2.7	20		µg/L	1	5/30/2019 4:41:09 PM	45177
Phenanthrene	ND	2.8	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Phenol	ND	8.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Pyrene	ND	2.5	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Pyridine	ND	9.6	10		µg/L	1	5/30/2019 4:41:09 PM	45177
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/30/2019 4:41:09 PM	45177
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/30/2019 4:41:09 PM	45177
Surr: 2-Fluorophenol	50.7	0	15-101		%Rec	1	5/30/2019 4:41:09 PM	45177
Surr: Phenol-d5	38.4	0	15-84.6		%Rec	1	5/30/2019 4:41:09 PM	45177
Surr: 2,4,6-Tribromophenol	83.9	0	27.8-112		%Rec	1	5/30/2019 4:41:09 PM	45177
Surr: Nitrobenzene-d5	80.3	0	33-113		%Rec	1	5/30/2019 4:41:09 PM	45177
Surr: 2-Fluorobiphenyl	63.2	0	26.6-107		%Rec	1	5/30/2019 4:41:09 PM	45177
Surr: 4-Terphenyl-d14	82.5	0	18.7-148		%Rec	1	5/30/2019 4:41:09 PM	45177
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Toluene	ND	0.35	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Methyl tert-butyl ether (MTBE)	36	0.46	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2-Dichloroethane (EDC)	0.66	0.19	1.0	J	µg/L	1	5/28/2019 6:28:00 PM	R60205

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 12:24:00 PM
Lab ID: 1905B47-003
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Naphthalene	ND	0.28	2.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Acetone	ND	1.2	10		µg/L	1	5/28/2019 6:28:00 PM	R60205
Bromobenzene	ND	0.24	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Bromoform	ND	0.29	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Bromomethane	ND	0.27	3.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
2-Butanone	ND	2.1	10		µg/L	1	5/28/2019 6:28:00 PM	R60205
Carbon disulfide	ND	0.45	10		µg/L	1	5/28/2019 6:28:00 PM	R60205
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Chloroethane	ND	0.18	2.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Chloroform	ND	0.12	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Chloromethane	ND	0.32	3.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Dibromomethane	ND	0.21	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,1-Dichloroethane	1.1	0.14	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
2-Hexanone	ND	1.5	10		µg/L	1	5/28/2019 6:28:00 PM	R60205
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/28/2019 6:28:00 PM	R60205
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/28/2019 6:28:00 PM	R60205

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 12:24:00 PM
Lab ID: 1905B47-003
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Styrene	ND	0.19	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/28/2019 6:28:00 PM	R60205
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/28/2019 6:28:00 PM	R60205
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	5/28/2019 6:28:00 PM	R60205
Surr: 4-Bromofluorobenzene	85.8	0	70-130		%Rec	1	5/28/2019 6:28:00 PM	R60205
Surr: Dibromofluoromethane	118	0	70-130		%Rec	1	5/28/2019 6:28:00 PM	R60205
Surr: Toluene-d8	95.0	0	70-130		%Rec	1	5/28/2019 6:28:00 PM	R60205

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-1
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 2:10:00 PM
Lab ID: 1905B47-004
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	6/1/2019 4:19:26 AM	45261
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/24/2019 5:15:37 PM	45173
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/24/2019 5:15:37 PM	45173
Surr: DNOP	105	0	70-130		%Rec	1	5/24/2019 5:15:37 PM	45173
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/24/2019 1:04:50 PM	G60182
Surr: BFB	90.8	0	72.8-125		%Rec	1	5/24/2019 1:04:50 PM	G60182
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.31	0.25	0.50	J	mg/L	5	5/23/2019 12:07:24 AM	R60103
Chloride	110	1.2	10		mg/L	20	5/23/2019 12:20:16 AM	R60103
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/23/2019 12:07:24 AM	R60103
Bromide	ND	0.089	0.50		mg/L	5	5/23/2019 12:07:24 AM	R60103
Nitrogen, Nitrate (As N)	0.34	0.027	0.50	J	mg/L	5	5/23/2019 12:07:24 AM	R60103
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/23/2019 12:07:24 AM	R60103
Sulfate	180	0.27	2.5		mg/L	5	5/23/2019 12:07:24 AM	R60103
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	6/3/2019 5:01:29 PM	B60357
Barium	0.036	0.00065	0.0020		mg/L	1	6/3/2019 5:01:29 PM	B60357
Beryllium	ND	0.00028	0.0020		mg/L	1	6/3/2019 5:01:29 PM	B60357
Boron	0.33	0.0045	0.040		mg/L	1	6/3/2019 5:01:29 PM	B60357
Cadmium	ND	0.00055	0.0020		mg/L	1	6/3/2019 5:01:29 PM	B60357
Calcium	2.3	0.062	1.0		mg/L	1	6/3/2019 5:01:29 PM	B60357
Chromium	ND	0.0015	0.0060		mg/L	1	6/3/2019 5:01:29 PM	B60357
Cobalt	ND	0.0031	0.0060		mg/L	1	6/3/2019 5:01:29 PM	B60357
Copper	ND	0.0013	0.0060		mg/L	1	6/3/2019 5:01:29 PM	B60357
Iron	ND	0.0087	0.020		mg/L	1	6/3/2019 5:01:29 PM	B60357
Magnesium	0.25	0.050	1.0	J	mg/L	1	6/3/2019 5:01:29 PM	B60357
Manganese	0.0015	0.00029	0.0020	J	mg/L	1	6/3/2019 5:01:29 PM	B60357
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/3/2019 5:01:29 PM	B60357
Nickel	ND	0.0040	0.010		mg/L	1	6/3/2019 5:01:29 PM	B60357
Potassium	0.76	0.16	1.0	J	mg/L	1	6/3/2019 5:01:29 PM	B60357
Silver	ND	0.00094	0.0050		mg/L	1	6/3/2019 5:01:29 PM	B60357
Sodium	330	2.1	5.0		mg/L	5	6/3/2019 5:03:27 PM	B60357
Zinc	0.046	0.0023	0.010		mg/L	1	6/3/2019 5:01:29 PM	B60357
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.028	0.0025	0.020		mg/L	1	5/31/2019 7:21:08 PM	45289

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-1
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 2:10:00 PM
Lab ID: 1905B47-004
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.037	0.00065	0.0020		mg/L	1	5/31/2019 7:21:08 PM	45289
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 7:21:08 PM	45289
Boron	0.34	0.0045	0.040		mg/L	1	5/31/2019 7:21:08 PM	45289
Cadmium	ND	0.00074	0.0020		mg/L	1	5/31/2019 7:21:08 PM	45289
Chromium	ND	0.0015	0.0060		mg/L	1	5/31/2019 7:21:08 PM	45289
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 7:21:08 PM	45289
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2019 7:21:08 PM	45289
Iron	0.023	0.0087	0.020		mg/L	1	6/6/2019 2:20:22 PM	45402
Manganese	0.0026	0.00029	0.0020		mg/L	1	5/31/2019 7:21:08 PM	45289
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 7:21:08 PM	45289
Nickel	ND	0.0040	0.010		mg/L	1	5/31/2019 7:21:08 PM	45289
Silver	ND	0.0014	0.0050		mg/L	1	5/31/2019 7:21:08 PM	45289
Zinc	ND	0.0058	0.010		mg/L	1	5/31/2019 7:21:08 PM	45289
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/4/2019 3:23:48 PM	B60379
Arsenic	0.00074	0.00010	0.0010	J	mg/L	1	6/4/2019 3:23:48 PM	B60379
Lead	ND	0.000055	0.00050		mg/L	1	6/4/2019 3:23:48 PM	B60379
Selenium	0.0023	0.00017	0.0010		mg/L	1	6/4/2019 3:23:48 PM	B60379
Thallium	ND	0.000048	0.00050		mg/L	1	6/4/2019 3:23:48 PM	B60379
Uranium	0.032	0.00037	0.0025	*	mg/L	5	6/6/2019 5:40:50 PM	B60465
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/31/2019 5:51:38 PM	45289
Arsenic	0.00067	0.00031	0.0010	J	mg/L	1	5/31/2019 5:51:38 PM	45289
Lead	ND	0.000055	0.00050		mg/L	1	5/31/2019 5:51:38 PM	45289
Selenium	0.0024	0.00048	0.0010		mg/L	1	5/31/2019 5:51:38 PM	45289
Thallium	ND	0.000052	0.00050		mg/L	1	5/31/2019 5:51:38 PM	45289
Uranium	0.034	0.00042	0.0025	*	mg/L	5	6/5/2019 1:16:18 PM	45289
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/4/2019 11:25:36 AM	45339
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Acenaphthylene	ND	2.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Aniline	ND	3.6	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Anthracene	ND	2.7	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Azobenzene	ND	3.3	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/30/2019 5:10:37 PM	45177

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-1
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 2:10:00 PM
Lab ID: 1905B47-004
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Benzoic acid	ND	11	20		µg/L	1	5/30/2019 5:10:37 PM	45177
Benzyl alcohol	2.4	2.4	10	J	µg/L	1	5/30/2019 5:10:37 PM	45177
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/30/2019 5:10:37 PM	45177
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Carbazole	ND	2.9	10		µg/L	1	5/30/2019 5:10:37 PM	45177
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
4-Chloroaniline	ND	2.3	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2-Chlorophenol	ND	2.7	10		µg/L	1	5/30/2019 5:10:37 PM	45177
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Chrysene	ND	2.8	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Dibenzofuran	ND	3.2	10		µg/L	1	5/30/2019 5:10:37 PM	45177
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/30/2019 5:10:37 PM	45177
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/30/2019 5:10:37 PM	45177
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Diethyl phthalate	ND	2.9	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/30/2019 5:10:37 PM	45177
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/30/2019 5:10:37 PM	45177
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/30/2019 5:10:37 PM	45177
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Fluoranthene	ND	2.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Fluorene	ND	2.9	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/30/2019 5:10:37 PM	45177

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-1
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 2:10:00 PM
Lab ID: 1905B47-004
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Hexachloroethane	ND	4.8	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Isophorone	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2-Methylphenol	ND	2.9	10		µg/L	1	5/30/2019 5:10:37 PM	45177
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/30/2019 5:10:37 PM	45177
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/30/2019 5:10:37 PM	45177
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Naphthalene	ND	4.1	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2-Nitroaniline	ND	3.2	10		µg/L	1	5/30/2019 5:10:37 PM	45177
3-Nitroaniline	ND	3.2	10		µg/L	1	5/30/2019 5:10:37 PM	45177
4-Nitroaniline	ND	2.7	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Nitrobenzene	ND	2.8	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2-Nitrophenol	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
4-Nitrophenol	ND	7.6	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Pentachlorophenol	ND	2.7	20		µg/L	1	5/30/2019 5:10:37 PM	45177
Phenanthrene	ND	2.8	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Phenol	ND	8.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Pyrene	ND	2.5	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Pyridine	ND	9.6	10		µg/L	1	5/30/2019 5:10:37 PM	45177
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/30/2019 5:10:37 PM	45177
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/30/2019 5:10:37 PM	45177
Surr: 2-Fluorophenol	53.8	0	15-101		%Rec	1	5/30/2019 5:10:37 PM	45177
Surr: Phenol-d5	39.1	0	15-84.6		%Rec	1	5/30/2019 5:10:37 PM	45177
Surr: 2,4,6-Tribromophenol	82.1	0	27.8-112		%Rec	1	5/30/2019 5:10:37 PM	45177
Surr: Nitrobenzene-d5	83.2	0	33-113		%Rec	1	5/30/2019 5:10:37 PM	45177
Surr: 2-Fluorobiphenyl	70.8	0	26.6-107		%Rec	1	5/30/2019 5:10:37 PM	45177
Surr: 4-Terphenyl-d14	78.6	0	18.7-148		%Rec	1	5/30/2019 5:10:37 PM	45177
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Toluene	ND	0.35	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Methyl tert-butyl ether (MTBE)	2.2	0.46	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-1
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 2:10:00 PM
Lab ID: 1905B47-004
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Naphthalene	ND	0.28	2.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Acetone	ND	1.2	10		µg/L	1	5/28/2019 7:39:00 PM	R60205
Bromobenzene	ND	0.24	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Bromoform	ND	0.29	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Bromomethane	ND	0.27	3.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
2-Butanone	ND	2.1	10		µg/L	1	5/28/2019 7:39:00 PM	R60205
Carbon disulfide	ND	0.45	10		µg/L	1	5/28/2019 7:39:00 PM	R60205
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Chloroethane	ND	0.18	2.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Chloroform	ND	0.12	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Chloromethane	ND	0.32	3.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Dibromomethane	ND	0.21	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
2-Hexanone	ND	1.5	10		µg/L	1	5/28/2019 7:39:00 PM	R60205
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/28/2019 7:39:00 PM	R60205
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/28/2019 7:39:00 PM	R60205

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-1
Project: 2019 2ND QTR GW Samples
Collection Date: 5/21/2019 2:10:00 PM
Lab ID: 1905B47-004
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Styrene	ND	0.19	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/28/2019 7:39:00 PM	R60205
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/28/2019 7:39:00 PM	R60205
Surr: 1,2-Dichloroethane-d4	120	0	70-130		%Rec	1	5/28/2019 7:39:00 PM	R60205
Surr: 4-Bromofluorobenzene	96.3	0	70-130		%Rec	1	5/28/2019 7:39:00 PM	R60205
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	5/28/2019 7:39:00 PM	R60205
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/28/2019 7:39:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 10:11:00 AM
Lab ID: 1905B47-005 **Matrix:** AQUEOUS **Received Date:** 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	6/1/2019 4:34:32 AM	45261
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/24/2019 5:37:49 PM	45173
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/24/2019 5:37:49 PM	45173
Surr: DNOP	110	0	70-130		%Rec	1	5/24/2019 5:37:49 PM	45173
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/24/2019 1:27:47 PM	G60182
Surr: BFB	92.9	0	72.8-125		%Rec	1	5/24/2019 1:27:47 PM	G60182
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.25	0.50		mg/L	5	5/23/2019 12:58:50 AM	R60103
Chloride	480	3.1	25		mg/L	50	6/3/2019 9:01:26 PM	R60362
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/23/2019 12:58:50 AM	R60103
Bromide	0.50	0.089	0.50		mg/L	5	5/23/2019 12:58:50 AM	R60103
Nitrogen, Nitrate (As N)	0.17	0.027	0.50	J	mg/L	5	5/23/2019 12:58:50 AM	R60103
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/23/2019 12:58:50 AM	R60103
Sulfate	91	0.27	2.5		mg/L	5	5/23/2019 12:58:50 AM	R60103
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.012	0.0025	0.020	J	mg/L	1	6/3/2019 5:05:35 PM	B60357
Barium	0.15	0.00065	0.0020		mg/L	1	6/3/2019 5:05:35 PM	B60357
Beryllium	ND	0.00028	0.0020		mg/L	1	6/3/2019 5:05:35 PM	B60357
Boron	0.34	0.0045	0.040		mg/L	1	6/3/2019 5:05:35 PM	B60357
Cadmium	ND	0.00055	0.0020		mg/L	1	6/3/2019 5:05:35 PM	B60357
Calcium	5.7	0.062	1.0		mg/L	1	6/3/2019 5:05:35 PM	B60357
Chromium	ND	0.0015	0.0060		mg/L	1	6/3/2019 5:05:35 PM	B60357
Cobalt	ND	0.0031	0.0060		mg/L	1	6/3/2019 5:05:35 PM	B60357
Copper	ND	0.0013	0.0060		mg/L	1	6/3/2019 5:05:35 PM	B60357
Iron	ND	0.0087	0.020		mg/L	1	6/3/2019 5:05:35 PM	B60357
Magnesium	0.56	0.050	1.0	J	mg/L	1	6/3/2019 5:05:35 PM	B60357
Manganese	0.011	0.00029	0.0020		mg/L	1	6/3/2019 5:05:35 PM	B60357
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/3/2019 5:05:35 PM	B60357
Nickel	ND	0.0040	0.010		mg/L	1	6/3/2019 5:05:35 PM	B60357
Potassium	1.1	0.16	1.0		mg/L	1	6/3/2019 5:05:35 PM	B60357
Silver	ND	0.00094	0.0050		mg/L	1	6/3/2019 5:05:35 PM	B60357
Sodium	490	2.1	5.0		mg/L	5	6/3/2019 5:07:31 PM	B60357
Zinc	0.068	0.0023	0.010		mg/L	1	6/3/2019 5:05:35 PM	B60357
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.4	0.012	0.10	*	mg/L	5	5/31/2019 7:27:35 PM	45289

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 10:11:00 AM
Lab ID: 1905B47-005
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.16	0.00065	0.0020		mg/L	1	5/31/2019 7:25:28 PM	45289
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 7:25:28 PM	45289
Boron	0.35	0.0045	0.040		mg/L	1	5/31/2019 7:25:28 PM	45289
Cadmium	ND	0.00074	0.0020		mg/L	1	5/31/2019 7:25:28 PM	45289
Chromium	ND	0.0015	0.0060		mg/L	1	5/31/2019 7:25:28 PM	45289
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 7:25:28 PM	45289
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2019 7:25:28 PM	45289
Iron	0.55	0.0087	0.020	*	mg/L	1	6/6/2019 2:22:23 PM	45402
Manganese	0.022	0.00029	0.0020		mg/L	1	5/31/2019 7:25:28 PM	45289
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 7:25:28 PM	45289
Nickel	ND	0.0040	0.010		mg/L	1	5/31/2019 7:25:28 PM	45289
Silver	ND	0.0014	0.0050		mg/L	1	5/31/2019 7:25:28 PM	45289
Zinc	ND	0.0058	0.010		mg/L	1	5/31/2019 7:25:28 PM	45289
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/4/2019 3:26:31 PM	B60379
Arsenic	0.0012	0.00010	0.0010		mg/L	1	6/4/2019 3:26:31 PM	B60379
Lead	ND	0.000055	0.00050		mg/L	1	6/4/2019 3:26:31 PM	B60379
Selenium	0.0015	0.00017	0.0010		mg/L	1	6/4/2019 3:26:31 PM	B60379
Thallium	ND	0.000048	0.00050		mg/L	1	6/4/2019 3:26:31 PM	B60379
Uranium	0.028	0.00037	0.0025		mg/L	5	6/6/2019 5:49:02 PM	B60465
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/31/2019 5:53:50 PM	45289
Arsenic	0.0012	0.00031	0.0010		mg/L	1	5/31/2019 5:53:50 PM	45289
Lead	0.00030	0.000055	0.00050	J	mg/L	1	5/31/2019 5:53:50 PM	45289
Selenium	0.0017	0.00048	0.0010		mg/L	1	5/31/2019 5:53:50 PM	45289
Thallium	ND	0.000052	0.00050		mg/L	1	5/31/2019 5:53:50 PM	45289
Uranium	0.029	0.00042	0.0025		mg/L	5	6/5/2019 1:18:29 PM	45289
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/4/2019 11:27:53 AM	45339
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Acenaphthylene	ND	2.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Aniline	ND	3.6	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Anthracene	ND	2.7	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Azobenzene	ND	3.3	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Benz(a)anthracene	ND	3.6	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Benzo(a)pyrene	ND	3.5	10		µg/L	1	5/30/2019 6:39:28 PM	45177

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 10:11:00 AM
Lab ID: 1905B47-005
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Benzoic acid	ND	11	20		µg/L	1	5/30/2019 6:39:28 PM	45177
Benzyl alcohol	ND	2.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	5/30/2019 6:39:28 PM	45177
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Carbazole	ND	2.9	10		µg/L	1	5/30/2019 6:39:28 PM	45177
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
4-Chloroaniline	ND	2.3	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2-Chloronaphthalene	ND	3.1	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2-Chlorophenol	ND	2.7	10		µg/L	1	5/30/2019 6:39:28 PM	45177
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Chrysene	ND	2.8	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Dibenzofuran	ND	3.2	10		µg/L	1	5/30/2019 6:39:28 PM	45177
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	5/30/2019 6:39:28 PM	45177
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	5/30/2019 6:39:28 PM	45177
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Diethyl phthalate	ND	2.9	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Dimethyl phthalate	ND	3.2	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	5/30/2019 6:39:28 PM	45177
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	5/30/2019 6:39:28 PM	45177
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	5/30/2019 6:39:28 PM	45177
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Fluoranthene	ND	2.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Fluorene	ND	2.9	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Hexachlorobenzene	ND	3.1	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Hexachlorobutadiene	ND	4.7	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	5/30/2019 6:39:28 PM	45177

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 10:11:00 AM
Lab ID: 1905B47-005 **Matrix:** AQUEOUS **Received Date:** 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Hexachloroethane	ND	4.8	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Isophorone	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
1-Methylnaphthalene	ND	3.1	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2-Methylnaphthalene	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2-Methylphenol	ND	2.9	10		µg/L	1	5/30/2019 6:39:28 PM	45177
3+4-Methylphenol	ND	3.6	10		µg/L	1	5/30/2019 6:39:28 PM	45177
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	5/30/2019 6:39:28 PM	45177
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Naphthalene	ND	4.1	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2-Nitroaniline	ND	3.2	10		µg/L	1	5/30/2019 6:39:28 PM	45177
3-Nitroaniline	ND	3.2	10		µg/L	1	5/30/2019 6:39:28 PM	45177
4-Nitroaniline	ND	2.7	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Nitrobenzene	ND	2.8	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2-Nitrophenol	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
4-Nitrophenol	ND	7.6	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Pentachlorophenol	ND	2.7	20		µg/L	1	5/30/2019 6:39:28 PM	45177
Phenanthrene	ND	2.8	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Phenol	ND	8.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Pyrene	ND	2.5	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Pyridine	ND	9.6	10		µg/L	1	5/30/2019 6:39:28 PM	45177
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	5/30/2019 6:39:28 PM	45177
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	5/30/2019 6:39:28 PM	45177
Surr: 2-Fluorophenol	50.1	0	15-101		%Rec	1	5/30/2019 6:39:28 PM	45177
Surr: Phenol-d5	36.2	0	15-84.6		%Rec	1	5/30/2019 6:39:28 PM	45177
Surr: 2,4,6-Tribromophenol	68.0	0	27.8-112		%Rec	1	5/30/2019 6:39:28 PM	45177
Surr: Nitrobenzene-d5	71.4	0	33-113		%Rec	1	5/30/2019 6:39:28 PM	45177
Surr: 2-Fluorobiphenyl	63.1	0	26.6-107		%Rec	1	5/30/2019 6:39:28 PM	45177
Surr: 4-Terphenyl-d14	65.7	0	18.7-148		%Rec	1	5/30/2019 6:39:28 PM	45177
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Toluene	ND	0.35	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Methyl tert-butyl ether (MTBE)	9.5	0.46	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 10:11:00 AM
Lab ID: 1905B47-005
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Naphthalene	ND	0.28	2.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Acetone	16	1.2	10		µg/L	1	5/28/2019 8:03:00 PM	R60205
Bromobenzene	ND	0.24	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Bromoform	ND	0.29	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Bromomethane	ND	0.27	3.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
2-Butanone	ND	2.1	10		µg/L	1	5/28/2019 8:03:00 PM	R60205
Carbon disulfide	ND	0.45	10		µg/L	1	5/28/2019 8:03:00 PM	R60205
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Chloroethane	ND	0.18	2.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Chloroform	ND	0.12	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Chloromethane	ND	0.32	3.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Dibromomethane	ND	0.21	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
2-Hexanone	ND	1.5	10		µg/L	1	5/28/2019 8:03:00 PM	R60205
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/28/2019 8:03:00 PM	R60205
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/28/2019 8:03:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 10:11:00 AM
Lab ID: 1905B47-005 **Matrix:** AQUEOUS **Received Date:** 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Styrene	ND	0.19	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/28/2019 8:03:00 PM	R60205
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/28/2019 8:03:00 PM	R60205
Surr: 1,2-Dichloroethane-d4	121	0	70-130		%Rec	1	5/28/2019 8:03:00 PM	R60205
Surr: 4-Bromofluorobenzene	96.9	0	70-130		%Rec	1	5/28/2019 8:03:00 PM	R60205
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/28/2019 8:03:00 PM	R60205
Surr: Toluene-d8	92.6	0	70-130		%Rec	1	5/28/2019 8:03:00 PM	R60205

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 11:46:00 AM
Lab ID: 1905B47-006
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	6/1/2019 4:49:37 AM	45261
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/24/2019 6:00:11 PM	45173
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/24/2019 6:00:11 PM	45173
Surr: DNOP	107	0	70-130		%Rec	1	5/24/2019 6:00:11 PM	45173
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/24/2019 1:50:26 PM	G60182
Surr: BFB	92.2	0	72.8-125		%Rec	1	5/24/2019 1:50:26 PM	G60182
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.97	0.25	0.50		mg/L	5	6/3/2019 9:14:17 PM	R60362
Chloride	81	0.31	2.5		mg/L	5	5/23/2019 1:24:33 AM	R60103
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	5/23/2019 1:24:33 AM	R60103
Bromide	ND	0.089	0.50		mg/L	5	5/23/2019 1:24:33 AM	R60103
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	5/23/2019 1:24:33 AM	R60103
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	5/23/2019 1:24:33 AM	R60103
Sulfate	220	1.1	10		mg/L	20	5/23/2019 1:37:25 AM	R60103
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.53	0.0025	0.020	*	mg/L	1	6/3/2019 5:09:44 PM	B60357
Barium	0.063	0.00065	0.0020		mg/L	1	6/3/2019 5:09:44 PM	B60357
Beryllium	ND	0.00028	0.0020		mg/L	1	6/3/2019 5:09:44 PM	B60357
Boron	2.2	0.023	0.20		mg/L	5	6/3/2019 5:11:43 PM	B60357
Cadmium	ND	0.00055	0.0020		mg/L	1	6/3/2019 5:09:44 PM	B60357
Calcium	5.1	0.062	1.0		mg/L	1	6/3/2019 5:09:44 PM	B60357
Chromium	ND	0.0015	0.0060		mg/L	1	6/3/2019 5:09:44 PM	B60357
Cobalt	ND	0.0031	0.0060		mg/L	1	6/3/2019 5:09:44 PM	B60357
Copper	ND	0.0013	0.0060		mg/L	1	6/3/2019 5:09:44 PM	B60357
Iron	0.28	0.0087	0.020		mg/L	1	6/3/2019 5:09:44 PM	B60357
Magnesium	0.64	0.050	1.0	J	mg/L	1	6/3/2019 5:09:44 PM	B60357
Manganese	0.044	0.00029	0.0020		mg/L	1	6/3/2019 5:09:44 PM	B60357
Molybdenum	0.025	0.0067	0.0080		mg/L	1	6/3/2019 5:09:44 PM	B60357
Nickel	0.0074	0.0040	0.010	J	mg/L	1	6/3/2019 5:09:44 PM	B60357
Potassium	1.5	0.16	1.0		mg/L	1	6/3/2019 5:09:44 PM	B60357
Silver	ND	0.00094	0.0050		mg/L	1	6/3/2019 5:09:44 PM	B60357
Sodium	420	2.1	5.0		mg/L	5	6/3/2019 5:11:43 PM	B60357
Zinc	0.031	0.0023	0.010		mg/L	1	6/3/2019 5:09:44 PM	B60357
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	81	0.50	4.0	*	mg/L	200	6/3/2019 4:23:40 PM	45289

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 11:46:00 AM
Lab ID: 1905B47-006
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	1.3	0.0032	0.010		mg/L	5	5/31/2019 7:32:03 PM	45289
Beryllium	0.0098	0.00028	0.0020	*	mg/L	1	5/31/2019 7:29:52 PM	45289
Boron	2.0	0.023	0.20		mg/L	5	5/31/2019 7:32:03 PM	45289
Cadmium	ND	0.00074	0.0020		mg/L	1	5/31/2019 7:29:52 PM	45289
Chromium	0.090	0.0015	0.0060		mg/L	1	5/31/2019 7:29:52 PM	45289
Cobalt	0.019	0.0031	0.0060		mg/L	1	5/31/2019 7:29:52 PM	45289
Copper	0.036	0.0041	0.0060		mg/L	1	5/31/2019 7:29:52 PM	45289
Iron	30	0.44	1.0	*	mg/L	50	6/3/2019 4:21:32 PM	45289
Manganese	1.1	0.0014	0.010	*	mg/L	5	5/31/2019 7:32:03 PM	45289
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 7:29:52 PM	45289
Nickel	0.059	0.0040	0.010		mg/L	1	5/31/2019 7:29:52 PM	45289
Silver	0.0017	0.0014	0.0050	J	mg/L	1	5/31/2019 7:29:52 PM	45289
Zinc	0.086	0.0058	0.010		mg/L	1	5/31/2019 7:29:52 PM	45289
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.0011	0.00039	0.0010		mg/L	1	6/4/2019 3:29:13 PM	B60379
Arsenic	0.011	0.00010	0.0010	*	mg/L	1	6/4/2019 3:29:13 PM	B60379
Lead	0.00045	0.000055	0.00050	J	mg/L	1	6/4/2019 3:29:13 PM	B60379
Selenium	0.00068	0.00017	0.0010	J	mg/L	1	6/4/2019 3:29:13 PM	B60379
Thallium	ND	0.000048	0.00050		mg/L	1	6/4/2019 3:29:13 PM	B60379
Uranium	0.056	0.00037	0.0025	*	mg/L	5	6/6/2019 5:59:54 PM	C60465
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	5/31/2019 5:56:01 PM	45289
Arsenic	0.017	0.00031	0.0010	*	mg/L	1	5/31/2019 5:56:01 PM	45289
Lead	0.033	0.00027	0.0025	*	mg/L	5	6/5/2019 1:20:41 PM	45289
Selenium	0.014	0.00048	0.0010		mg/L	1	5/31/2019 5:56:01 PM	45289
Thallium	0.00040	0.000052	0.00050	J	mg/L	1	5/31/2019 5:56:01 PM	45289
Uranium	0.071	0.00042	0.0025	*	mg/L	5	6/5/2019 1:20:41 PM	45289
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/4/2019 11:30:09 AM	45339
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Acenaphthylene	ND	12	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Aniline	ND	18	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Anthracene	ND	13	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Azobenzene	ND	16	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Benz(a)anthracene	ND	18	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Benzo(a)pyrene	ND	18	50		µg/L	1	5/30/2019 7:09:20 PM	45177

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Qualifiers:

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D	Sample Diluted Due to Matrix
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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 11:46:00 AM
Lab ID: 1905B47-006
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(b)fluoranthene	ND	17	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Benzo(g,h,i)perylene	ND	11	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Benzo(k)fluoranthene	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Benzoic acid	ND	54	100		µg/L	1	5/30/2019 7:09:20 PM	45177
Benzyl alcohol	ND	12	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Bis(2-chloroethoxy)methane	ND	13	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Bis(2-chloroethyl)ether	ND	16	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Bis(2-chloroisopropyl)ether	ND	19	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Bis(2-ethylhexyl)phthalate	ND	22	50		µg/L	1	5/30/2019 7:09:20 PM	45177
4-Bromophenyl phenyl ether	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Butyl benzyl phthalate	ND	17	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Carbazole	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
4-Chloro-3-methylphenol	ND	17	50		µg/L	1	5/30/2019 7:09:20 PM	45177
4-Chloroaniline	ND	11	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2-Chloronaphthalene	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2-Chlorophenol	ND	13	50		µg/L	1	5/30/2019 7:09:20 PM	45177
4-Chlorophenyl phenyl ether	ND	12	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Chrysene	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Di-n-butyl phthalate	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Di-n-octyl phthalate	20	18	50	J	µg/L	1	5/30/2019 7:09:20 PM	45177
Dibenz(a,h)anthracene	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Dibenzofuran	ND	16	50		µg/L	1	5/30/2019 7:09:20 PM	45177
1,2-Dichlorobenzene	ND	24	50		µg/L	1	5/30/2019 7:09:20 PM	45177
1,3-Dichlorobenzene	ND	26	50		µg/L	1	5/30/2019 7:09:20 PM	45177
1,4-Dichlorobenzene	ND	22	50		µg/L	1	5/30/2019 7:09:20 PM	45177
3,3´-Dichlorobenzidine	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Diethyl phthalate	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Dimethyl phthalate	ND	16	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2,4-Dichlorophenol	ND	15	100		µg/L	1	5/30/2019 7:09:20 PM	45177
2,4-Dimethylphenol	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
4,6-Dinitro-2-methylphenol	ND	14	100		µg/L	1	5/30/2019 7:09:20 PM	45177
2,4-Dinitrophenol	ND	13	100		µg/L	1	5/30/2019 7:09:20 PM	45177
2,4-Dinitrotoluene	ND	19	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2,6-Dinitrotoluene	ND	12	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Fluoranthene	ND	12	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Fluorene	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Hexachlorobenzene	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Hexachlorobutadiene	ND	24	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Hexachlorocyclopentadiene	ND	18	50		µg/L	1	5/30/2019 7:09:20 PM	45177

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 11:46:00 AM
Lab ID: 1905B47-006
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Hexachloroethane	ND	24	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Indeno(1,2,3-cd)pyrene	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Isophorone	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
1-Methylnaphthalene	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2-Methylnaphthalene	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2-Methylphenol	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
3+4-Methylphenol	ND	18	50		µg/L	1	5/30/2019 7:09:20 PM	45177
N-Nitrosodi-n-propylamine	ND	32	50		µg/L	1	5/30/2019 7:09:20 PM	45177
N-Nitrosodimethylamine	ND	25	50		µg/L	1	5/30/2019 7:09:20 PM	45177
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Naphthalene	ND	21	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2-Nitroaniline	ND	16	50		µg/L	1	5/30/2019 7:09:20 PM	45177
3-Nitroaniline	ND	16	50		µg/L	1	5/30/2019 7:09:20 PM	45177
4-Nitroaniline	ND	13	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Nitrobenzene	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2-Nitrophenol	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
4-Nitrophenol	ND	38	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Pentachlorophenol	ND	14	100		µg/L	1	5/30/2019 7:09:20 PM	45177
Phenanthrene	ND	14	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Phenol	ND	40	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Pyrene	ND	13	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Pyridine	ND	48	50		µg/L	1	5/30/2019 7:09:20 PM	45177
1,2,4-Trichlorobenzene	ND	20	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2,4,5-Trichlorophenol	ND	15	50		µg/L	1	5/30/2019 7:09:20 PM	45177
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	5/30/2019 7:09:20 PM	45177
Surr: 2-Fluorophenol	46.4	0	15-101		%Rec	1	5/30/2019 7:09:20 PM	45177
Surr: Phenol-d5	34.3	0	15-84.6		%Rec	1	5/30/2019 7:09:20 PM	45177
Surr: 2,4,6-Tribromophenol	58.7	0	27.8-112		%Rec	1	5/30/2019 7:09:20 PM	45177
Surr: Nitrobenzene-d5	64.5	0	33-113		%Rec	1	5/30/2019 7:09:20 PM	45177
Surr: 2-Fluorobiphenyl	47.5	0	26.6-107		%Rec	1	5/30/2019 7:09:20 PM	45177
Surr: 4-Terphenyl-d14	62.2	0	18.7-148		%Rec	1	5/30/2019 7:09:20 PM	45177
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Toluene	ND	0.35	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 11:46:00 AM
Lab ID: 1905B47-006 **Matrix:** AQUEOUS **Received Date:** 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Naphthalene	ND	0.28	2.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Acetone	12	1.2	10		µg/L	1	5/28/2019 8:27:00 PM	R60205
Bromobenzene	ND	0.24	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Bromoform	ND	0.29	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Bromomethane	ND	0.27	3.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
2-Butanone	ND	2.1	10		µg/L	1	5/28/2019 8:27:00 PM	R60205
Carbon disulfide	0.63	0.45	10	J	µg/L	1	5/28/2019 8:27:00 PM	R60205
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Chloroethane	ND	0.18	2.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Chloroform	ND	0.12	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Chloromethane	ND	0.32	3.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Dibromomethane	ND	0.21	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
2-Hexanone	ND	1.5	10		µg/L	1	5/28/2019 8:27:00 PM	R60205
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/28/2019 8:27:00 PM	R60205
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/28/2019 8:27:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 2019 2ND QTR GW Samples
Collection Date: 5/22/2019 11:46:00 AM
Lab ID: 1905B47-006
Matrix: AQUEOUS
Received Date: 5/22/2019 4:10:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Styrene	ND	0.19	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/28/2019 8:27:00 PM	R60205
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/28/2019 8:27:00 PM	R60205
Surr: 1,2-Dichloroethane-d4	123	0	70-130		%Rec	1	5/28/2019 8:27:00 PM	R60205
Surr: 4-Bromofluorobenzene	97.6	0	70-130		%Rec	1	5/28/2019 8:27:00 PM	R60205
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	5/28/2019 8:27:00 PM	R60205
Surr: Toluene-d8	98.9	0	70-130		%Rec	1	5/28/2019 8:27:00 PM	R60205

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45289** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **45289** RunNo: **60330**

Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2039415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0047	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45289** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **45289** RunNo: **60330**

Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2039417** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.015	0.020	0.01000	0	147	50	150			J
Barium	0.0022	0.0020	0.002000	0	109	50	150			
Beryllium	0.0022	0.0020	0.002000	0	108	50	150			
Boron	0.040	0.040	0.04000	0	99.4	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	99.0	50	150			J
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Cobalt	0.0063	0.0060	0.006000	0	105	50	150			
Copper	0.0069	0.0060	0.006000	0	115	50	150			
Iron	0.032	0.020	0.02000	0	160	50	150			S
Manganese	0.0023	0.0020	0.002000	0	115	50	150			
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0057	0.010	0.005000	0	115	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.8	50	150			J
Zinc	0.011	0.010	0.01000	0	114	50	150			

Sample ID: **LCS-45289** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **45289** RunNo: **60330**

Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2039419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45289**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45289**	RunNo: **60330**
Prep Date: **5/30/2019**	Analysis Date: **5/31/2019**	SeqNo: **2039419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	103	85	115			
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Beryllium	0.51	0.0020	0.5000	0	101	85	115			
Boron	0.49	0.040	0.5000	0	97.7	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	99.8	85	115			
Cobalt	0.52	0.0060	0.5000	0	105	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.3	85	115			
Nickel	0.50	0.010	0.5000	0	100	85	115			
Silver	0.096	0.0050	0.1000	0	96.4	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID: **MB-45289**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45289**	RunNo: **60357**
Prep Date: **5/30/2019**	Analysis Date: **6/3/2019**	SeqNo: **2040647** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID: **LLLCS-45289**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **45289**	RunNo: **60357**
Prep Date: **5/30/2019**	Analysis Date: **6/3/2019**	SeqNo: **2040648** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.031	0.020	0.02000	0	157	50	150			S

Sample ID: **LCS-45289**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45289**	RunNo: **60357**
Prep Date: **5/30/2019**	Analysis Date: **6/3/2019**	SeqNo: **2040649** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040653** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040654** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0071	0.020	0.01000	0	70.6	50	150			J
Barium	0.0018	0.0020	0.002000	0	89.0	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	98.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.8	50	150			J
Cadmium	0.0025	0.0020	0.002000	0	127	50	150			
Calcium	0.53	1.0	0.5000	0	105	50	150			J
Chromium	0.0061	0.0060	0.006000	0	101	50	150			
Cobalt	0.0058	0.0060	0.006000	0	96.1	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.023	0.020	0.02000	0	117	50	150			
Magnesium	0.53	1.0	0.5000	0	105	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	112	50	150			
Nickel	0.0052	0.010	0.005000	0	104	50	150			J
Potassium	0.54	1.0	0.5000	0	107	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040654** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Sodium	0.58	1.0	0.5000	0	115	50	150			J
Zinc	0.010	0.010	0.01000	0	99.6	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.1	85	115			
Boron	0.48	0.040	0.5000	0	95.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	49	1.0	50.00	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.9	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.49	0.020	0.5000	0	98.4	85	115			
Magnesium	49	1.0	50.00	0	98.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.3	85	115			
Nickel	0.48	0.010	0.5000	0	95.6	85	115			
Potassium	48	1.0	50.00	0	96.6	85	115			
Silver	0.097	0.0050	0.1000	0	97.4	85	115			
Sodium	50	1.0	50.00	0	99.1	85	115			
Zinc	0.47	0.010	0.5000	0	94.9	85	115			

Sample ID: **MB-45402**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45402**	RunNo: **60447**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID: **LLLCS-45402**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **45402**	RunNo: **60447**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS-45402**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **45402**	RunNo: **60447**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.023	0.020	0.02000	0	113	50	150			

Sample ID: **LCS-45402**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45402**	RunNo: **60447**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.51	0.020	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040917** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040918** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0071	0.020	0.01000	0	70.6	50	150			J
Barium	0.0018	0.0020	0.002000	0	89.0	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	98.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.8	50	150			J
Cadmium	0.0025	0.0020	0.002000	0	127	50	150			
Calcium	0.53	1.0	0.5000	0	105	50	150			J
Chromium	0.0061	0.0060	0.006000	0	101	50	150			
Cobalt	0.0058	0.0060	0.006000	0	96.1	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.023	0.020	0.02000	0	117	50	150			
Magnesium	0.53	1.0	0.5000	0	105	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	112	50	150			
Nickel	0.0052	0.010	0.005000	0	104	50	150			J
Potassium	0.54	1.0	0.5000	0	107	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60357** RunNo: **60357**
Prep Date: Analysis Date: **6/3/2019** SeqNo: **2040918** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Sodium	0.58	1.0	0.5000	0	115	50	150			J
Zinc	0.010	0.010	0.01000	0	99.6	50	150			J

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B60357** RunNo: **60357**
Prep Date: Analysis Date: **6/3/2019** SeqNo: **2040919** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.1	85	115			
Boron	0.48	0.040	0.5000	0	95.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	49	1.0	50.00	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.9	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.49	0.020	0.5000	0	98.4	85	115			
Magnesium	49	1.0	50.00	0	98.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.3	85	115			
Nickel	0.48	0.010	0.5000	0	95.6	85	115			
Potassium	48	1.0	50.00	0	96.6	85	115			
Silver	0.097	0.0050	0.1000	0	97.4	85	115			
Sodium	50	1.0	50.00	0	99.1	85	115			
Zinc	0.47	0.010	0.5000	0	94.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45289** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45289** RunNo: **60319**
Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2038938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45289** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45289** RunNo: **60319**
Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2038939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	100	50	150			
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.0013	0.0010	0.001000	0	135	50	150			
Thallium	0.00046	0.00050	0.0005000	0	92.4	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.9	50	150			J

Sample ID: **MSLCS-45289** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45289** RunNo: **60319**
Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2038940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	102	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.012	0.00050	0.01250	0	99.4	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Thallium	0.012	0.00050	0.01250	0	98.5	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B60379**	RunNo: **60379**
Prep Date:	Analysis Date: **6/4/2019**	SeqNo: **2041939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	0.00030	0.0010								J
Thallium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B60379**	RunNo: **60379**
Prep Date:	Analysis Date: **6/4/2019**	SeqNo: **2041940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	104	50	150			
Arsenic	0.0011	0.0010	0.001000	0	114	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.2	50	150			J
Selenium	0.0014	0.0010	0.001000	0	138	50	150			
Thallium	0.00048	0.00050	0.0005000	0	96.6	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B60379**	RunNo: **60379**
Prep Date:	Analysis Date: **6/4/2019**	SeqNo: **2041941** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	96.9	85	115			
Arsenic	0.027	0.0010	0.02500	0	107	85	115			
Lead	0.012	0.00050	0.01250	0	96.1	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Thallium	0.012	0.00050	0.01250	0	97.2	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B60465**	RunNo: **60465**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045301** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B60465**	RunNo: **60465**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045302** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B60465**	RunNo: **60465**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045302** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00045	0.00050	0.0005000	0	90.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B60465**	RunNo: **60465**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045303** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.011	0.00050	0.01250	0	89.2	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C60465**	RunNo: **60465**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C60465**	RunNo: **60465**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C60465**	RunNo: **60465**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045357** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.011	0.00050	0.01250	0	88.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45339**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **45339**	RunNo: **60367**
Prep Date: **6/3/2019**	Analysis Date: **6/4/2019**	SeqNo: **2041322** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-45339**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **45339**	RunNo: **60367**
Prep Date: **6/3/2019**	Analysis Date: **6/4/2019**	SeqNo: **2041323** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.3	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R60103**	RunNo: **60103**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030076** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R60103**	RunNo: **60103**
Prep Date:	Analysis Date: **5/22/2019**	SeqNo: **2030077** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	110	90	110			
Chloride	5.1	0.50	5.000	0	102	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.4	90	110			
Bromide	2.5	0.10	2.500	0	99.9	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.4	90	110			
Sulfate	10	0.50	10.00	0	99.6	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R60362**	RunNo: **60362**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2041149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R60362**	RunNo: **60362**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2041150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.7	90	110			
Chloride	4.7	0.50	5.000	0	94.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45261**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **45261**	RunNo: **60333**
Prep Date: **5/31/2019**	Analysis Date: **5/31/2019**	SeqNo: **2039707** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-45261**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **45261**	RunNo: **60333**
Prep Date: **5/31/2019**	Analysis Date: **5/31/2019**	SeqNo: **2039708** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.088	0.010	0.1000	0	88.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45173**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **45173**	RunNo: **60131**
Prep Date: **5/24/2019**	Analysis Date: **5/24/2019**	SeqNo: **2032027** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		103	70	130			

Sample ID: **LCS-45173**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **45173**	RunNo: **60131**
Prep Date: **5/24/2019**	Analysis Date: **5/24/2019**	SeqNo: **2032028** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	71.8	135			
Surr: DNOP	0.48		0.5000		96.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60182**	RunNo: **60182**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2032750** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		91.1	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G60182**	RunNo: **60182**
Prep Date:	Analysis Date: **5/24/2019**	SeqNo: **2032751** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.9	77.7	130			
Surr: BFB	20		20.00		101	72.8	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R60205** RunNo: **60205**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034547** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.9	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	97.9	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R60205** RunNo: **60205**
Prep Date: Analysis Date: **5/28/2019** SeqNo: **2034550** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60205**	RunNo: **60205**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034550** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60205**	RunNo: **60205**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034550** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID: **1905b47-003ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BW-5C**	Batch ID: **R60205**	RunNo: **60205**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034557** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	20	1.0	20.00	0	98.1	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	67.6	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		120	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.6		10.00		96.3	70	130			

Sample ID: **1905b47-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BW-5C**	Batch ID: **R60205**	RunNo: **60205**
Prep Date:	Analysis Date: **5/28/2019**	SeqNo: **2034558** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130	5.54	20	
Toluene	16	1.0	20.00	0	80.3	70	130	20.0	20	
Chlorobenzene	19	1.0	20.00	0	95.3	70	130	5.47	20	
1,1-Dichloroethene	21	1.0	20.00	0	105	67.6	130	1.01	20	
Trichloroethene (TCE)	18	1.0	20.00	0	89.9	70	130	13.0	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		111	70	130	0	0	
Surr: Toluene-d8	8.2		10.00		81.6	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **1905b47-004dms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-1** Batch ID: **45177** RunNo: **60289**

Prep Date: **5/24/2019** Analysis Date: **5/30/2019** SeqNo: **2037615** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	73	10	100.0	0	72.7	30	94			
4-Chloro-3-methylphenol	180	10	200.0	0	91.1	30.9	101			
2-Chlorophenol	160	10	200.0	0	78.0	15.8	96.2			
1,4-Dichlorobenzene	51	10	100.0	0	51.4	25.6	87.2			
2,4-Dinitrotoluene	66	10	100.0	0	65.9	29.5	85.8			
N-Nitrosodi-n-propylamine	84	10	100.0	0	83.5	28.6	108			
4-Nitrophenol	83	10	200.0	0	41.3	15	59.7			
Pentachlorophenol	140	20	200.0	0	69.3	21.1	99.4			
Phenol	84	10	200.0	0	42.2	15	61.9			
Pyrene	80	10	100.0	0	79.6	37.5	105			
1,2,4-Trichlorobenzene	61	10	100.0	0	60.6	17.1	98.7			
Surr: 2-Fluorophenol	110		200.0		54.8	15	101			
Surr: Phenol-d5	88		200.0		44.0	15	84.6			
Surr: 2,4,6-Tribromophenol	190		200.0		94.8	27.8	112			
Surr: Nitrobenzene-d5	79		100.0		79.1	33	113			
Surr: 2-Fluorobiphenyl	73		100.0		72.5	26.6	107			
Surr: 4-Terphenyl-d14	94		100.0		94.4	18.7	148			

Sample ID: **1905b47-004dmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-1** Batch ID: **45177** RunNo: **60289**

Prep Date: **5/24/2019** Analysis Date: **5/30/2019** SeqNo: **2037616** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.1	30	94	15.8	47.7	
4-Chloro-3-methylphenol	150	10	200.0	0	77.3	30.9	101	16.3	54.7	
2-Chlorophenol	130	10	200.0	0	64.5	15.8	96.2	18.9	40.9	
1,4-Dichlorobenzene	43	10	100.0	0	42.7	25.6	87.2	18.6	46.8	
2,4-Dinitrotoluene	55	10	100.0	0	55.3	29.5	85.8	17.4	49.8	
N-Nitrosodi-n-propylamine	75	10	100.0	0	74.6	28.6	108	11.2	45.2	
4-Nitrophenol	67	10	200.0	0	33.7	15	59.7	20.2	82.1	
Pentachlorophenol	110	20	200.0	0	57.2	21.1	99.4	19.1	52	
Phenol	71	10	200.0	0	35.4	15	61.9	17.5	61.9	
Pyrene	59	10	100.0	0	59.2	37.5	105	29.4	39.9	
1,2,4-Trichlorobenzene	50	10	100.0	0	49.8	17.1	98.7	19.5	47.5	
Surr: 2-Fluorophenol	92		200.0		46.2	15	101	0	0	
Surr: Phenol-d5	72		200.0		36.0	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		73.0	27.8	112	0	0	
Surr: Nitrobenzene-d5	69		100.0		69.4	33	113	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.8	26.6	107	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**

10-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **1905b47-004dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-1**	Batch ID: **45177**	RunNo: **60289**
Prep Date: **5/24/2019**	Analysis Date: **5/30/2019**	SeqNo: **2037616** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	70		100.0		70.1	18.7	148	0	0	

Sample ID: **lcs-45177**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **45177**	RunNo: **60289**
Prep Date: **5/24/2019**	Analysis Date: **5/30/2019**	SeqNo: **2037619** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	70.8	32.2	94			
4-Chloro-3-methylphenol	180	10	200.0	0	88.2	37.7	101			
2-Chlorophenol	150	10	200.0	0	76.0	32.6	90.1			
1,4-Dichlorobenzene	62	10	100.0	0	61.6	30	87.2			
2,4-Dinitrotoluene	68	10	100.0	0	68.0	35.9	85.8			
N-Nitrosodi-n-propylamine	80	10	100.0	0	79.7	37.1	108			
4-Nitrophenol	120	10	200.0	0	62.2	22.4	86.6			
Pentachlorophenol	120	20	200.0	0	62.5	31.6	91			
Phenol	120	10	200.0	0	59.9	21.7	84.9			
Pyrene	71	10	100.0	0	70.6	46.3	103			
1,2,4-Trichlorobenzene	72	10	100.0	0	72.5	30.2	88.3			
Surr: 2-Fluorophenol	130		200.0		66.3	15	101			
Surr: Phenol-d5	130		200.0		63.5	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		82.5	27.8	112			
Surr: Nitrobenzene-d5	78		100.0		78.2	33	113			
Surr: 2-Fluorobiphenyl	71		100.0		70.9	26.6	107			
Surr: 4-Terphenyl-d14	77		100.0		77.4	18.7	148			

Sample ID: **mb-45177**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **45177**	RunNo: **60289**
Prep Date: **5/24/2019**	Analysis Date: **5/30/2019**	SeqNo: **2037620** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **mb-45177** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **45177** RunNo: **60289**
Prep Date: **5/24/2019** Analysis Date: **5/30/2019** SeqNo: **2037620** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905B47**
10-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **mb-45177** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **45177** RunNo: **60289**
Prep Date: **5/24/2019** Analysis Date: **5/30/2019** SeqNo: **2037620** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		57.8	15	101			
Surr: Phenol-d5	100		200.0		52.2	15	84.6			
Surr: 2,4,6-Tribromophenol	140		200.0		70.1	27.8	112			
Surr: Nitrobenzene-d5	73		100.0		72.7	33	113			
Surr: 2-Fluorobiphenyl	59		100.0		59.0	26.6	107			
Surr: 4-Terphenyl-d14	74		100.0		74.2	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905B47** RcptNo: **1**

Received By: **Isaiah Ortiz** **5/22/2019 4:10:00 PM** I-OK

Completed By: **Erin Melendrez** **5/22/2019 4:16:57 PM** [illegible]

Reviewed By: (unpres.) TWN 5-22-19 / DAD 5/23/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: LB 5/23/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			
2	2.3	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - WESTERN REFINING SW

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
X Standard ☐ Rush_____

Project Name:
2019 2ND QTR GW SAMPLES

Project #:
BW-5B, 5C, 4B, OW-1

Project Manager:
Brian Moore

Sampler: C. JOHNSON (CAJohnson1@marathonpetroleum.com)

On Ice: ☑ Yes ☐ No (+0.2)

Sample Temperature: 1.9°C 2.3°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905B47	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS		8011 FOR EDB					Air Bubbles (Y or N)
5/21/2019	700	aqueous	FIELD BLANK	3-40ML VOAS	HCL	-001	X												
5/21/2019	700	aqueous	TRIP BLANK	3-40ML VOAS	HCL	-002	X												
5/21/2019	1224	aqueous	BW-5C	Misc	Misc	-003	X	X	X	X	X	X		X					
5/21/2019	1410	aqueous	OW-1	Misc	Misc	-004	X	X	X	X	2	X		X					
5/22/2019	1011	aqueous	BW-5B	Misc	Misc	-005	X	X	X	X	X	X		X					
5/22/2019	1146	aqueous	BW-4B	Misc	Misc	-006	X	X	X	X	X	X		X					

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/22/19	1400			5/22/19	1405
5/22/19	1610			5/22/19	1610

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 17, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 2nd QTR GW Samples OrderNo.: 1905D86

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/29/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 7:00:00 AM
Lab ID: 1905D86-001 **Matrix:** AQUEOUS **Received Date:** 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Toluene	ND	0.35	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Naphthalene	ND	0.28	2.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Acetone	ND	1.2	10		µg/L	1	5/31/2019 4:17:18 PM	R60301
Bromobenzene	ND	0.24	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Bromoform	ND	0.29	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Bromomethane	ND	0.27	3.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
2-Butanone	ND	2.1	10		µg/L	1	5/31/2019 4:17:18 PM	R60301
Carbon disulfide	ND	0.45	10		µg/L	1	5/31/2019 4:17:18 PM	R60301
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Chloroethane	ND	0.18	2.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Chloroform	ND	0.12	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Chloromethane	ND	0.32	3.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Dibromomethane	ND	0.21	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/31/2019 4:17:18 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 7:00:00 AM
Lab ID: 1905D86-001
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
2-Hexanone	ND	1.5	10		µg/L	1	5/31/2019 4:17:18 PM	R60301
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/31/2019 4:17:18 PM	R60301
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Styrene	ND	0.19	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/31/2019 4:17:18 PM	R60301
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/31/2019 4:17:18 PM	R60301
Surr: 1,2-Dichloroethane-d4	80.9	0	70-130		%Rec	1	5/31/2019 4:17:18 PM	R60301
Surr: 4-Bromofluorobenzene	87.1	0	70-130		%Rec	1	5/31/2019 4:17:18 PM	R60301
Surr: Dibromofluoromethane	96.3	0	70-130		%Rec	1	5/31/2019 4:17:18 PM	R60301
Surr: Toluene-d8	85.1	0	70-130		%Rec	1	5/31/2019 4:17:18 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Samples
Collection Date:
Lab ID: 1905D86-002
Matrix: TRIP BLANK
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Toluene	ND	0.35	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Naphthalene	ND	0.28	2.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Acetone	ND	1.2	10		µg/L	1	5/31/2019 4:46:04 PM	R60301
Bromobenzene	ND	0.24	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Bromoform	ND	0.29	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Bromomethane	ND	0.27	3.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
2-Butanone	ND	2.1	10		µg/L	1	5/31/2019 4:46:04 PM	R60301
Carbon disulfide	ND	0.45	10		µg/L	1	5/31/2019 4:46:04 PM	R60301
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Chloroethane	ND	0.18	2.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Chloroform	ND	0.12	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Chloromethane	ND	0.32	3.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Dibromomethane	ND	0.21	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/31/2019 4:46:04 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Samples
Collection Date:
Lab ID: 1905D86-002
Matrix: TRIP BLANK
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
2-Hexanone	ND	1.5	10		µg/L	1	5/31/2019 4:46:04 PM	R60301
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/31/2019 4:46:04 PM	R60301
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Styrene	ND	0.19	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/31/2019 4:46:04 PM	R60301
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/31/2019 4:46:04 PM	R60301
Surr: 1,2-Dichloroethane-d4	82.6	0	70-130		%Rec	1	5/31/2019 4:46:04 PM	R60301
Surr: 4-Bromofluorobenzene	88.0	0	70-130		%Rec	1	5/31/2019 4:46:04 PM	R60301
Surr: Dibromofluoromethane	95.3	0	70-130		%Rec	1	5/31/2019 4:46:04 PM	R60301
Surr: Toluene-d8	84.3	0	70-130		%Rec	1	5/31/2019 4:46:04 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:40:00 PM
Lab ID: 1905D86-003
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/31/2019 6:34:37 PM	45279
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/31/2019 6:34:37 PM	45279
Surr: DNOP	88.4	0	70-130		%Rec	1	5/31/2019 6:34:37 PM	45279
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.073	0.50		mg/L	5	5/29/2019 8:57:20 PM	R60264
Chloride	530	25	25		mg/L	50	6/12/2019 10:51:47 AM	R60620
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	5/29/2019 8:57:20 PM	R60264
Bromide	0.97	0.089	0.50		mg/L	5	5/29/2019 8:57:20 PM	R60264
Nitrogen, Nitrate (As N)	0.87	0.025	0.50		mg/L	5	5/29/2019 8:57:20 PM	R60264
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	5/29/2019 8:57:20 PM	R60264
Sulfate	180	1.3	10		mg/L	20	5/29/2019 9:10:12 PM	R60264
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/31/2019 4:49:26 PM	A60330
Barium	0.049	0.00065	0.0020		mg/L	1	5/31/2019 4:49:26 PM	A60330
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 4:49:26 PM	A60330
Boron	0.51	0.0045	0.040		mg/L	1	5/31/2019 4:49:26 PM	A60330
Cadmium	ND	0.00055	0.0020		mg/L	1	5/31/2019 4:49:26 PM	A60330
Calcium	63	0.062	1.0		mg/L	1	5/31/2019 4:49:26 PM	A60330
Chromium	ND	0.0015	0.0060		mg/L	1	5/31/2019 4:49:26 PM	A60330
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 4:49:26 PM	A60330
Copper	ND	0.0013	0.0060		mg/L	1	5/31/2019 4:49:26 PM	A60330
Iron	ND	0.0087	0.020		mg/L	1	5/31/2019 4:49:26 PM	A60330
Magnesium	9.5	0.050	1.0		mg/L	1	5/31/2019 4:49:26 PM	A60330
Manganese	0.039	0.00029	0.0020		mg/L	1	5/31/2019 4:49:26 PM	A60330
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 4:49:26 PM	A60330
Nickel	ND	0.0040	0.010		mg/L	1	5/31/2019 4:49:26 PM	A60330
Potassium	1.0	0.16	1.0		mg/L	1	5/31/2019 4:49:26 PM	A60330
Silver	0.0015	0.00094	0.0050	J	mg/L	1	5/31/2019 4:49:26 PM	A60330
Sodium	530	4.2	10		mg/L	10	6/3/2019 4:40:41 PM	B60357
Zinc	0.019	0.0023	0.010		mg/L	1	5/31/2019 4:49:26 PM	A60330
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.014	0.0025	0.020	J	mg/L	1	6/8/2019 3:31:38 PM	45455
Barium	0.049	0.00065	0.0020		mg/L	1	6/8/2019 3:31:38 PM	45455
Beryllium	ND	0.00028	0.0020		mg/L	1	6/8/2019 3:31:38 PM	45455
Boron	0.51	0.0045	0.040		mg/L	1	6/8/2019 3:31:38 PM	45455
Cadmium	ND	0.00074	0.0020		mg/L	1	6/8/2019 3:31:38 PM	45455
Chromium	ND	0.0015	0.0060		mg/L	1	6/8/2019 3:31:38 PM	45455
Cobalt	ND	0.0031	0.0060		mg/L	1	6/8/2019 3:31:38 PM	45455

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:40:00 PM
Lab ID: 1905D86-003
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2019 3:31:38 PM	45455
Iron	0.010	0.0087	0.020	J	mg/L	1	6/8/2019 3:31:38 PM	45455
Manganese	0.037	0.00029	0.0020		mg/L	1	6/8/2019 3:31:38 PM	45455
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/8/2019 3:31:38 PM	45455
Nickel	ND	0.0040	0.010		mg/L	1	6/8/2019 3:31:38 PM	45455
Silver	ND	0.0014	0.0050		mg/L	1	6/8/2019 3:31:38 PM	45455
Zinc	ND	0.0058	0.010		mg/L	1	6/8/2019 3:31:38 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/6/2019 6:59:33 PM	C60465
Arsenic	0.00047	0.00010	0.0010	J	mg/L	1	6/6/2019 6:59:33 PM	C60465
Lead	0.00015	0.000055	0.00050	J	mg/L	1	6/6/2019 6:59:33 PM	C60465
Selenium	0.0075	0.00017	0.0010		mg/L	1	6/6/2019 6:59:33 PM	C60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 6:59:33 PM	C60465
Uranium	0.046	0.00037	0.0025	*	mg/L	5	6/10/2019 3:23:51 PM	A60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/11/2019 6:54:37 PM	45455
Arsenic	0.00075	0.00031	0.0010	J	mg/L	1	6/11/2019 6:54:37 PM	45455
Lead	0.00012	0.000055	0.00050	J	mg/L	1	6/11/2019 6:54:37 PM	45455
Selenium	0.010	0.00048	0.0010		mg/L	1	6/11/2019 6:54:37 PM	45455
Thallium	ND	0.000052	0.00050		mg/L	1	6/11/2019 6:54:37 PM	45455
Uranium	0.044	0.00042	0.0025	*	mg/L	5	6/12/2019 6:33:37 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/6/2019 11:42:37 AM	45407
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Acenaphthylene	ND	2.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Aniline	ND	3.6	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Anthracene	ND	2.7	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Azobenzene	ND	3.3	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Benz(a)anthracene	ND	3.6	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Benzo(a)pyrene	ND	3.5	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Benzoic acid	12	11	20	J	µg/L	1	6/6/2019 1:30:54 PM	45334
Benzyl alcohol	ND	2.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	6/6/2019 1:30:54 PM	45334

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:40:00 PM
Lab ID: 1905D86-003
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	6/6/2019 1:30:54 PM	45334
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Carbazole	ND	2.9	10		µg/L	1	6/6/2019 1:30:54 PM	45334
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
4-Chloroaniline	ND	2.3	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2-Chloronaphthalene	ND	3.1	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2-Chlorophenol	ND	2.7	10		µg/L	1	6/6/2019 1:30:54 PM	45334
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Chrysene	ND	2.8	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Dibenzofuran	ND	3.2	10		µg/L	1	6/6/2019 1:30:54 PM	45334
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/6/2019 1:30:54 PM	45334
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	6/6/2019 1:30:54 PM	45334
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Diethyl phthalate	ND	2.9	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Dimethyl phthalate	ND	3.2	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	6/6/2019 1:30:54 PM	45334
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	6/6/2019 1:30:54 PM	45334
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	6/6/2019 1:30:54 PM	45334
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Fluoranthene	ND	2.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Fluorene	ND	2.9	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Hexachlorobenzene	ND	3.1	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Hexachlorobutadiene	ND	4.7	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Hexachloroethane	ND	4.8	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Isophorone	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
1-Methylnaphthalene	ND	3.1	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2-Methylnaphthalene	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2-Methylphenol	ND	2.9	10		µg/L	1	6/6/2019 1:30:54 PM	45334

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:40:00 PM
Lab ID: 1905D86-003
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	6/6/2019 1:30:54 PM	45334
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	6/6/2019 1:30:54 PM	45334
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Naphthalene	ND	4.1	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 1:30:54 PM	45334
3-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 1:30:54 PM	45334
4-Nitroaniline	ND	2.7	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Nitrobenzene	ND	2.8	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2-Nitrophenol	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
4-Nitrophenol	ND	7.6	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Pentachlorophenol	ND	2.7	20		µg/L	1	6/6/2019 1:30:54 PM	45334
Phenanthrene	ND	2.8	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Phenol	ND	8.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Pyrene	ND	2.5	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Pyridine	ND	9.6	10		µg/L	1	6/6/2019 1:30:54 PM	45334
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	6/6/2019 1:30:54 PM	45334
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	6/6/2019 1:30:54 PM	45334
Surr: 2-Fluorophenol	51.7	0	15-101		%Rec	1	6/6/2019 1:30:54 PM	45334
Surr: Phenol-d5	37.9	0	15-84.6		%Rec	1	6/6/2019 1:30:54 PM	45334
Surr: 2,4,6-Tribromophenol	73.8	0	27.8-112		%Rec	1	6/6/2019 1:30:54 PM	45334
Surr: Nitrobenzene-d5	72.4	0	33-113		%Rec	1	6/6/2019 1:30:54 PM	45334
Surr: 2-Fluorobiphenyl	67.7	0	26.6-107		%Rec	1	6/6/2019 1:30:54 PM	45334
Surr: 4-Terphenyl-d14	77.6	0	18.7-148		%Rec	1	6/6/2019 1:30:54 PM	45334

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:50:00 PM
Lab ID: 1905D86-004
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/31/2019 7:41:33 PM	45279
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/31/2019 7:41:33 PM	45279
Surr: DNOP	104	0	70-130		%Rec	1	5/31/2019 7:41:33 PM	45279
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.25	0.073	0.50	J	mg/L	5	5/29/2019 9:23:03 PM	R60264
Chloride	510	25	25		mg/L	50	6/12/2019 11:04:09 AM	R60620
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	5/29/2019 9:23:03 PM	R60264
Bromide	0.98	0.089	0.50		mg/L	5	5/29/2019 9:23:03 PM	R60264
Nitrogen, Nitrate (As N)	0.88	0.025	0.50		mg/L	5	5/29/2019 9:23:03 PM	R60264
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	5/29/2019 9:23:03 PM	R60264
Sulfate	220	0.33	2.5		mg/L	5	5/29/2019 9:23:03 PM	R60264
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/31/2019 4:54:00 PM	A60330
Barium	0.049	0.00065	0.0020		mg/L	1	5/31/2019 4:54:00 PM	A60330
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 4:54:00 PM	A60330
Boron	0.51	0.0045	0.040		mg/L	1	5/31/2019 4:54:00 PM	A60330
Cadmium	ND	0.00055	0.0020		mg/L	1	5/31/2019 4:54:00 PM	A60330
Calcium	63	0.062	1.0		mg/L	1	5/31/2019 4:54:00 PM	A60330
Chromium	ND	0.0015	0.0060		mg/L	1	5/31/2019 4:54:00 PM	A60330
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 4:54:00 PM	A60330
Copper	ND	0.0013	0.0060		mg/L	1	5/31/2019 4:54:00 PM	A60330
Iron	ND	0.0087	0.020		mg/L	1	5/31/2019 4:54:00 PM	A60330
Magnesium	9.5	0.050	1.0		mg/L	1	5/31/2019 4:54:00 PM	A60330
Manganese	0.039	0.00029	0.0020		mg/L	1	5/31/2019 4:54:00 PM	A60330
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 4:54:00 PM	A60330
Nickel	ND	0.0040	0.010		mg/L	1	5/31/2019 4:54:00 PM	A60330
Potassium	1.1	0.16	1.0		mg/L	1	5/31/2019 4:54:00 PM	A60330
Silver	ND	0.00094	0.0050		mg/L	1	5/31/2019 4:54:00 PM	A60330
Sodium	530	4.2	10		mg/L	10	6/3/2019 4:42:50 PM	B60357
Zinc	0.014	0.0023	0.010		mg/L	1	5/31/2019 4:54:00 PM	A60330
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.0094	0.0025	0.020	J	mg/L	1	6/8/2019 3:36:02 PM	45455
Barium	0.048	0.00065	0.0020		mg/L	1	6/8/2019 3:36:02 PM	45455
Beryllium	ND	0.00028	0.0020		mg/L	1	6/8/2019 3:36:02 PM	45455
Boron	0.50	0.0045	0.040		mg/L	1	6/8/2019 3:36:02 PM	45455
Cadmium	ND	0.00074	0.0020		mg/L	1	6/8/2019 3:36:02 PM	45455
Chromium	ND	0.0015	0.0060		mg/L	1	6/8/2019 3:36:02 PM	45455
Cobalt	ND	0.0031	0.0060		mg/L	1	6/8/2019 3:36:02 PM	45455

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:50:00 PM
Lab ID: 1905D86-004
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2019 3:36:02 PM	45455
Iron	0.013	0.0087	0.020	J	mg/L	1	6/8/2019 3:36:02 PM	45455
Manganese	0.037	0.00029	0.0020		mg/L	1	6/8/2019 3:36:02 PM	45455
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/8/2019 3:36:02 PM	45455
Nickel	ND	0.0040	0.010		mg/L	1	6/8/2019 3:36:02 PM	45455
Silver	0.0017	0.0014	0.0050	J	mg/L	1	6/8/2019 3:36:02 PM	45455
Zinc	ND	0.0058	0.010		mg/L	1	6/8/2019 3:36:02 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/6/2019 7:02:16 PM	C60465
Arsenic	0.00060	0.00010	0.0010	J	mg/L	1	6/6/2019 7:02:16 PM	C60465
Lead	0.00014	0.000055	0.00050	J	mg/L	1	6/6/2019 7:02:16 PM	C60465
Selenium	0.0085	0.00017	0.0010		mg/L	1	6/6/2019 7:02:16 PM	C60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 7:02:16 PM	C60465
Uranium	0.045	0.00037	0.0025	*	mg/L	5	6/10/2019 3:26:33 PM	A60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/11/2019 6:56:49 PM	45455
Arsenic	0.00063	0.00031	0.0010	J	mg/L	1	6/11/2019 6:56:49 PM	45455
Lead	0.00013	0.000055	0.00050	J	mg/L	1	6/11/2019 6:56:49 PM	45455
Selenium	0.010	0.00048	0.0010		mg/L	1	6/11/2019 6:56:49 PM	45455
Thallium	ND	0.000052	0.00050		mg/L	1	6/11/2019 6:56:49 PM	45455
Uranium	0.044	0.00042	0.0025	*	mg/L	5	6/12/2019 6:44:37 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/6/2019 11:44:53 AM	45407
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Acenaphthylene	ND	2.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Aniline	ND	3.6	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Anthracene	ND	2.7	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Azobenzene	ND	3.3	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Benz(a)anthracene	ND	3.6	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Benzo(a)pyrene	ND	3.5	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Benzoic acid	ND	11	20		µg/L	1	6/6/2019 2:01:01 PM	45334
Benzyl alcohol	ND	2.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	6/6/2019 2:01:01 PM	45334

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:50:00 PM
Lab ID: 1905D86-004
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	6/6/2019 2:01:01 PM	45334
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Carbazole	ND	2.9	10		µg/L	1	6/6/2019 2:01:01 PM	45334
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
4-Chloroaniline	ND	2.3	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2-Chloronaphthalene	ND	3.1	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2-Chlorophenol	ND	2.7	10		µg/L	1	6/6/2019 2:01:01 PM	45334
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Chrysene	ND	2.8	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Dibenzofuran	ND	3.2	10		µg/L	1	6/6/2019 2:01:01 PM	45334
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/6/2019 2:01:01 PM	45334
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	6/6/2019 2:01:01 PM	45334
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Diethyl phthalate	ND	2.9	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Dimethyl phthalate	ND	3.2	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	6/6/2019 2:01:01 PM	45334
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	6/6/2019 2:01:01 PM	45334
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	6/6/2019 2:01:01 PM	45334
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Fluoranthene	ND	2.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Fluorene	ND	2.9	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Hexachlorobenzene	ND	3.1	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Hexachlorobutadiene	ND	4.7	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Hexachloroethane	ND	4.8	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Isophorone	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
1-Methylnaphthalene	ND	3.1	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2-Methylnaphthalene	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2-Methylphenol	ND	2.9	10		µg/L	1	6/6/2019 2:01:01 PM	45334

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 2:50:00 PM
Lab ID: 1905D86-004
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	6/6/2019 2:01:01 PM	45334
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	6/6/2019 2:01:01 PM	45334
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Naphthalene	ND	4.1	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 2:01:01 PM	45334
3-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 2:01:01 PM	45334
4-Nitroaniline	ND	2.7	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Nitrobenzene	ND	2.8	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2-Nitrophenol	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
4-Nitrophenol	ND	7.6	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Pentachlorophenol	ND	2.7	20		µg/L	1	6/6/2019 2:01:01 PM	45334
Phenanthrene	ND	2.8	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Phenol	ND	8.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Pyrene	ND	2.5	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Pyridine	ND	9.6	10		µg/L	1	6/6/2019 2:01:01 PM	45334
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	6/6/2019 2:01:01 PM	45334
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	6/6/2019 2:01:01 PM	45334
Surr: 2-Fluorophenol	53.8	0	15-101		%Rec	1	6/6/2019 2:01:01 PM	45334
Surr: Phenol-d5	39.2	0	15-84.6		%Rec	1	6/6/2019 2:01:01 PM	45334
Surr: 2,4,6-Tribromophenol	70.4	0	27.8-112		%Rec	1	6/6/2019 2:01:01 PM	45334
Surr: Nitrobenzene-d5	77.0	0	33-113		%Rec	1	6/6/2019 2:01:01 PM	45334
Surr: 2-Fluorobiphenyl	68.0	0	26.6-107		%Rec	1	6/6/2019 2:01:01 PM	45334
Surr: 4-Terphenyl-d14	72.5	0	18.7-148		%Rec	1	6/6/2019 2:01:01 PM	45334

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 12:10:00 PM
Lab ID: 1905D86-005
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	5/31/2019 8:03:56 PM	45279
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/31/2019 8:03:56 PM	45279
Surr: DNOP	119	0	70-130		%Rec	1	5/31/2019 8:03:56 PM	45279
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.69	0.073	0.50		mg/L	5	5/29/2019 9:49:26 PM	R60264
Chloride	420	25	25		mg/L	50	6/12/2019 11:16:29 AM	R60620
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	5/29/2019 9:49:26 PM	R60264
Bromide	2.5	0.089	0.50		mg/L	5	5/29/2019 9:49:26 PM	R60264
Nitrogen, Nitrate (As N)	4.2	0.025	0.50		mg/L	5	5/29/2019 9:49:26 PM	R60264
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	5/29/2019 9:49:26 PM	R60264
Sulfate	170	0.33	2.5		mg/L	5	5/29/2019 9:49:26 PM	R60264
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.12	0.0025	0.020		mg/L	1	5/31/2019 4:58:39 PM	A60330
Barium	0.094	0.00065	0.0020		mg/L	1	5/31/2019 4:58:39 PM	A60330
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 4:58:39 PM	A60330
Boron	1.9	0.023	0.20		mg/L	5	5/31/2019 5:00:49 PM	A60330
Cadmium	ND	0.00055	0.0020		mg/L	1	5/31/2019 4:58:39 PM	A60330
Calcium	21	0.062	1.0		mg/L	1	5/31/2019 4:58:39 PM	A60330
Chromium	ND	0.0015	0.0060		mg/L	1	5/31/2019 4:58:39 PM	A60330
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 4:58:39 PM	A60330
Copper	0.0022	0.0013	0.0060	J	mg/L	1	5/31/2019 4:58:39 PM	A60330
Iron	0.069	0.0087	0.020		mg/L	1	5/31/2019 4:58:39 PM	A60330
Magnesium	3.5	0.050	1.0		mg/L	1	5/31/2019 4:58:39 PM	A60330
Manganese	0.054	0.00029	0.0020	*	mg/L	1	5/31/2019 4:58:39 PM	A60330
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 4:58:39 PM	A60330
Nickel	0.014	0.0040	0.010		mg/L	1	5/31/2019 4:58:39 PM	A60330
Potassium	2.1	0.16	1.0		mg/L	1	5/31/2019 4:58:39 PM	A60330
Silver	ND	0.00094	0.0050		mg/L	1	5/31/2019 4:58:39 PM	A60330
Sodium	620	4.2	10		mg/L	10	6/3/2019 4:44:58 PM	B60357
Zinc	0.027	0.0023	0.010		mg/L	1	5/31/2019 4:58:39 PM	A60330
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	9.0	0.050	0.40	*	mg/L	20	6/8/2019 3:44:09 PM	45455
Barium	0.27	0.00065	0.0020		mg/L	1	6/8/2019 3:40:22 PM	45455
Beryllium	0.00064	0.00028	0.0020	J	mg/L	1	6/8/2019 3:40:22 PM	45455
Boron	2.1	0.023	0.20		mg/L	5	6/8/2019 3:42:19 PM	45455
Cadmium	ND	0.00074	0.0020		mg/L	1	6/8/2019 3:40:22 PM	45455
Chromium	0.012	0.0015	0.0060		mg/L	1	6/8/2019 3:40:22 PM	45455
Cobalt	0.0031	0.0031	0.0060	J	mg/L	1	6/8/2019 3:40:22 PM	45455

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 12:10:00 PM
Lab ID: 1905D86-005
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2019 3:40:22 PM	45455
Iron	4.4	0.044	0.10	*	mg/L	5	6/8/2019 3:42:19 PM	45455
Manganese	0.23	0.00029	0.0020	*	mg/L	1	6/8/2019 3:40:22 PM	45455
Molybdenum	0.013	0.0067	0.0080		mg/L	1	6/8/2019 3:40:22 PM	45455
Nickel	0.019	0.0040	0.010		mg/L	1	6/8/2019 3:40:22 PM	45455
Silver	ND	0.0014	0.0050		mg/L	1	6/8/2019 3:40:22 PM	45455
Zinc	0.087	0.0058	0.010		mg/L	1	6/8/2019 3:40:22 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00078	0.00039	0.0010	J	mg/L	1	6/6/2019 7:04:59 PM	C60465
Arsenic	0.0014	0.00010	0.0010		mg/L	1	6/6/2019 7:04:59 PM	C60465
Lead	0.00033	0.000055	0.00050	J	mg/L	1	6/6/2019 7:04:59 PM	C60465
Selenium	0.0032	0.00017	0.0010		mg/L	1	6/6/2019 7:04:59 PM	C60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 7:04:59 PM	C60465
Uranium	0.033	0.00037	0.0025	*	mg/L	5	6/10/2019 3:29:15 PM	A60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00075	0.00039	0.0010	J	mg/L	1	6/11/2019 6:59:00 PM	45455
Arsenic	0.0026	0.00031	0.0010		mg/L	1	6/11/2019 6:59:00 PM	45455
Lead	0.0052	0.000055	0.00050		mg/L	1	6/11/2019 6:59:00 PM	45455
Selenium	0.0027	0.00048	0.0010		mg/L	1	6/11/2019 6:59:00 PM	45455
Thallium	ND	0.000052	0.00050		mg/L	1	6/11/2019 6:59:00 PM	45455
Uranium	0.037	0.00042	0.0025	*	mg/L	5	6/12/2019 6:46:48 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/6/2019 11:47:10 AM	45407
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Acenaphthylene	ND	2.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Aniline	ND	3.6	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Anthracene	ND	2.7	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Azobenzene	ND	3.3	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Benz(a)anthracene	ND	3.6	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Benzo(a)pyrene	ND	3.5	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Benzoic acid	ND	11	20		µg/L	1	6/6/2019 2:30:45 PM	45334
Benzyl alcohol	ND	2.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	6/6/2019 2:30:45 PM	45334

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 12:10:00 PM
Lab ID: 1905D86-005
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	6/6/2019 2:30:45 PM	45334
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Carbazole	ND	2.9	10		µg/L	1	6/6/2019 2:30:45 PM	45334
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
4-Chloroaniline	ND	2.3	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2-Chloronaphthalene	ND	3.1	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2-Chlorophenol	ND	2.7	10		µg/L	1	6/6/2019 2:30:45 PM	45334
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Chrysene	ND	2.8	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Dibenzofuran	ND	3.2	10		µg/L	1	6/6/2019 2:30:45 PM	45334
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/6/2019 2:30:45 PM	45334
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	6/6/2019 2:30:45 PM	45334
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Diethyl phthalate	ND	2.9	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Dimethyl phthalate	ND	3.2	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	6/6/2019 2:30:45 PM	45334
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	6/6/2019 2:30:45 PM	45334
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	6/6/2019 2:30:45 PM	45334
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Fluoranthene	ND	2.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Fluorene	ND	2.9	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Hexachlorobenzene	ND	3.1	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Hexachlorobutadiene	ND	4.7	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Hexachloroethane	ND	4.8	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Isophorone	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
1-Methylnaphthalene	ND	3.1	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2-Methylnaphthalene	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2-Methylphenol	ND	2.9	10		µg/L	1	6/6/2019 2:30:45 PM	45334

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 12:10:00 PM
Lab ID: 1905D86-005
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	6/6/2019 2:30:45 PM	45334
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	6/6/2019 2:30:45 PM	45334
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Naphthalene	ND	4.1	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 2:30:45 PM	45334
3-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 2:30:45 PM	45334
4-Nitroaniline	ND	2.7	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Nitrobenzene	ND	2.8	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2-Nitrophenol	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
4-Nitrophenol	ND	7.6	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Pentachlorophenol	ND	2.7	20		µg/L	1	6/6/2019 2:30:45 PM	45334
Phenanthrene	ND	2.8	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Phenol	ND	8.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Pyrene	ND	2.5	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Pyridine	ND	9.6	10		µg/L	1	6/6/2019 2:30:45 PM	45334
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	6/6/2019 2:30:45 PM	45334
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	6/6/2019 2:30:45 PM	45334
Surr: 2-Fluorophenol	62.2	0	15-101		%Rec	1	6/6/2019 2:30:45 PM	45334
Surr: Phenol-d5	42.4	0	15-84.6		%Rec	1	6/6/2019 2:30:45 PM	45334
Surr: 2,4,6-Tribromophenol	75.5	0	27.8-112		%Rec	1	6/6/2019 2:30:45 PM	45334
Surr: Nitrobenzene-d5	86.4	0	33-113		%Rec	1	6/6/2019 2:30:45 PM	45334
Surr: 2-Fluorobiphenyl	77.1	0	26.6-107		%Rec	1	6/6/2019 2:30:45 PM	45334
Surr: 4-Terphenyl-d14	72.0	0	18.7-148		%Rec	1	6/6/2019 2:30:45 PM	45334

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:55:00 AM
Lab ID: 1905D86-006
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.64	0.35	1.0	J	mg/L	1	5/31/2019 8:26:12 PM	45279
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/31/2019 8:26:12 PM	45279
Surr: DNOP	120	0	70-130		%Rec	1	5/31/2019 8:26:12 PM	45279
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.48	0.11	0.25		mg/L	5	6/6/2019 1:07:26 PM	G60459
Surr: BFB	98.1	0	72.8-125		%Rec	5	6/6/2019 1:07:26 PM	G60459
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.0	0.073	0.50		mg/L	5	5/29/2019 10:14:39 PM	R60264
Chloride	230	10	10		mg/L	20	5/29/2019 10:27:30 PM	R60264
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	5/29/2019 10:14:39 PM	R60264
Bromide	1.7	0.089	0.50		mg/L	5	5/29/2019 10:14:39 PM	R60264
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	5/29/2019 10:14:39 PM	R60264
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	5/29/2019 10:14:39 PM	R60264
Sulfate	12	0.33	2.5		mg/L	5	5/29/2019 10:14:39 PM	R60264
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	5/31/2019 5:02:52 PM	A60330
Barium	1.3	0.0032	0.010		mg/L	5	5/31/2019 5:05:04 PM	A60330
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 5:02:52 PM	A60330
Boron	0.61	0.0045	0.040		mg/L	1	5/31/2019 5:02:52 PM	A60330
Cadmium	ND	0.00055	0.0020		mg/L	1	5/31/2019 5:02:52 PM	A60330
Calcium	110	0.31	5.0		mg/L	5	5/31/2019 5:05:04 PM	A60330
Chromium	ND	0.0015	0.0060		mg/L	1	5/31/2019 5:02:52 PM	A60330
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 5:02:52 PM	A60330
Copper	ND	0.0013	0.0060		mg/L	1	5/31/2019 5:02:52 PM	A60330
Iron	0.37	0.0087	0.020	*	mg/L	1	5/31/2019 5:02:52 PM	A60330
Magnesium	18	0.050	1.0		mg/L	1	5/31/2019 5:02:52 PM	A60330
Manganese	1.6	0.0014	0.010	*	mg/L	5	5/31/2019 5:05:04 PM	A60330
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 5:02:52 PM	A60330
Nickel	0.018	0.0040	0.010		mg/L	1	5/31/2019 5:02:52 PM	A60330
Potassium	0.34	0.16	1.0	J	mg/L	1	5/31/2019 5:02:52 PM	A60330
Silver	0.0017	0.00094	0.0050	J	mg/L	1	5/31/2019 5:02:52 PM	A60330
Sodium	380	2.1	5.0		mg/L	5	5/31/2019 5:05:04 PM	A60330
Zinc	0.0094	0.0023	0.010	J	mg/L	1	5/31/2019 5:02:52 PM	A60330
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.20	0.0025	0.020		mg/L	1	6/8/2019 3:48:18 PM	45455
Barium	1.3	0.0032	0.010		mg/L	5	6/8/2019 3:50:16 PM	45455
Beryllium	ND	0.00028	0.0020		mg/L	1	6/8/2019 3:48:18 PM	45455

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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:55:00 AM
Lab ID: 1905D86-006
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Boron	0.62	0.0045	0.040		mg/L	1	6/8/2019 3:48:18 PM	45455
Cadmium	ND	0.00074	0.0020		mg/L	1	6/8/2019 3:48:18 PM	45455
Chromium	ND	0.0015	0.0060		mg/L	1	6/8/2019 3:48:18 PM	45455
Cobalt	ND	0.0031	0.0060		mg/L	1	6/8/2019 3:48:18 PM	45455
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2019 3:48:18 PM	45455
Iron	1.6	0.044	0.10	*	mg/L	5	6/8/2019 3:50:16 PM	45455
Manganese	1.5	0.0014	0.010	*	mg/L	5	6/8/2019 3:50:16 PM	45455
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/8/2019 3:48:18 PM	45455
Nickel	0.019	0.0040	0.010		mg/L	1	6/8/2019 3:48:18 PM	45455
Silver	ND	0.0014	0.0050		mg/L	1	6/8/2019 3:48:18 PM	45455
Zinc	ND	0.0058	0.010		mg/L	1	6/8/2019 3:48:18 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00056	0.00039	0.0010	J	mg/L	1	6/6/2019 7:07:41 PM	C60465
Arsenic	0.0052	0.00010	0.0010		mg/L	1	6/6/2019 7:07:41 PM	C60465
Lead	0.00012	0.000055	0.00050	J	mg/L	1	6/6/2019 7:07:41 PM	C60465
Selenium	ND	0.00017	0.0010		mg/L	1	6/6/2019 7:07:41 PM	C60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 7:07:41 PM	C60465
Uranium	0.0073	0.000075	0.00050		mg/L	1	6/6/2019 7:07:41 PM	C60465
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00043	0.00039	0.0010	J	mg/L	1	6/11/2019 7:01:12 PM	45455
Arsenic	0.0092	0.00031	0.0010		mg/L	1	6/11/2019 7:01:12 PM	45455
Lead	0.00043	0.000055	0.00050	J	mg/L	1	6/11/2019 7:01:12 PM	45455
Selenium	ND	0.00048	0.0010		mg/L	1	6/11/2019 7:01:12 PM	45455
Thallium	ND	0.000052	0.00050		mg/L	1	6/11/2019 7:01:12 PM	45455
Uranium	0.0077	0.000085	0.00050		mg/L	1	6/11/2019 7:01:12 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/6/2019 11:49:28 AM	45407
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Acenaphthylene	ND	2.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Aniline	ND	3.6	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Anthracene	ND	2.7	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Azobenzene	ND	3.3	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Benz(a)anthracene	ND	3.6	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Benzo(a)pyrene	ND	3.5	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	6/6/2019 3:00:21 PM	45334

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:55:00 AM
Lab ID: 1905D86-006
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Benzoic acid	ND	11	20		µg/L	1	6/6/2019 3:00:21 PM	45334
Benzyl alcohol	ND	2.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	6/6/2019 3:00:21 PM	45334
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Carbazole	ND	2.9	10		µg/L	1	6/6/2019 3:00:21 PM	45334
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
4-Chloroaniline	ND	2.3	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2-Chloronaphthalene	ND	3.1	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2-Chlorophenol	ND	2.7	10		µg/L	1	6/6/2019 3:00:21 PM	45334
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Chrysene	ND	2.8	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Dibenzofuran	ND	3.2	10		µg/L	1	6/6/2019 3:00:21 PM	45334
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/6/2019 3:00:21 PM	45334
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	6/6/2019 3:00:21 PM	45334
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Diethyl phthalate	ND	2.9	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Dimethyl phthalate	ND	3.2	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	6/6/2019 3:00:21 PM	45334
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	6/6/2019 3:00:21 PM	45334
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	6/6/2019 3:00:21 PM	45334
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Fluoranthene	ND	2.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Fluorene	ND	2.9	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Hexachlorobenzene	ND	3.1	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Hexachlorobutadiene	ND	4.7	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Hexachloroethane	ND	4.8	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	6/6/2019 3:00:21 PM	45334

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:55:00 AM
Lab ID: 1905D86-006
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Isophorone	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
1-Methylnaphthalene	3.5	3.1	10	J	µg/L	1	6/6/2019 3:00:21 PM	45334
2-Methylnaphthalene	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2-Methylphenol	ND	2.9	10		µg/L	1	6/6/2019 3:00:21 PM	45334
3+4-Methylphenol	ND	3.6	10		µg/L	1	6/6/2019 3:00:21 PM	45334
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	6/6/2019 3:00:21 PM	45334
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Naphthalene	ND	4.1	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 3:00:21 PM	45334
3-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 3:00:21 PM	45334
4-Nitroaniline	ND	2.7	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Nitrobenzene	ND	2.8	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2-Nitrophenol	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
4-Nitrophenol	ND	7.6	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Pentachlorophenol	ND	2.7	20		µg/L	1	6/6/2019 3:00:21 PM	45334
Phenanthrene	ND	2.8	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Phenol	ND	8.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Pyrene	ND	2.5	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Pyridine	ND	9.6	10		µg/L	1	6/6/2019 3:00:21 PM	45334
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	6/6/2019 3:00:21 PM	45334
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	6/6/2019 3:00:21 PM	45334
Surr: 2-Fluorophenol	60.5	0	15-101		%Rec	1	6/6/2019 3:00:21 PM	45334
Surr: Phenol-d5	41.5	0	15-84.6		%Rec	1	6/6/2019 3:00:21 PM	45334
Surr: 2,4,6-Tribromophenol	79.8	0	27.8-112		%Rec	1	6/6/2019 3:00:21 PM	45334
Surr: Nitrobenzene-d5	89.2	0	33-113		%Rec	1	6/6/2019 3:00:21 PM	45334
Surr: 2-Fluorobiphenyl	80.1	0	26.6-107		%Rec	1	6/6/2019 3:00:21 PM	45334
Surr: 4-Terphenyl-d14	76.4	0	18.7-148		%Rec	1	6/6/2019 3:00:21 PM	45334
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	200	1.7	10		µg/L	10	5/31/2019 5:14:53 PM	R60301
Toluene	ND	0.35	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Ethylbenzene	15	0.13	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Methyl tert-butyl ether (MTBE)	61	0.46	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2,4-Trimethylbenzene	0.32	0.21	1.0	J	µg/L	1	5/31/2019 5:43:40 PM	R60301
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Naphthalene	5.7	0.28	2.0		µg/L	1	5/31/2019 5:43:40 PM	R60301

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Qualifiers:

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:55:00 AM
Lab ID: 1905D86-006
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1-Methylnaphthalene	5.6	0.31	4.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
2-Methylnaphthalene	2.2	0.35	4.0	J	µg/L	1	5/31/2019 5:43:40 PM	R60301
Acetone	5.5	1.2	10	J	µg/L	1	5/31/2019 5:43:40 PM	R60301
Bromobenzene	ND	0.24	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Bromoform	ND	0.29	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Bromomethane	ND	0.27	3.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
2-Butanone	ND	2.1	10		µg/L	1	5/31/2019 5:43:40 PM	R60301
Carbon disulfide	ND	0.45	10		µg/L	1	5/31/2019 5:43:40 PM	R60301
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Chloroethane	ND	0.18	2.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Chloroform	ND	0.12	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Chloromethane	ND	0.32	3.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Dibromomethane	ND	0.21	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
2-Hexanone	ND	1.5	10		µg/L	1	5/31/2019 5:43:40 PM	R60301
Isopropylbenzene	1.3	0.19	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/31/2019 5:43:40 PM	R60301
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
n-Propylbenzene	0.91	0.21	1.0	J	µg/L	1	5/31/2019 5:43:40 PM	R60301

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:55:00 AM
Lab ID: 1905D86-006
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Styrene	ND	0.19	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/31/2019 5:43:40 PM	R60301
Xylenes, Total	0.57	0.45	1.5	J	µg/L	1	5/31/2019 5:43:40 PM	R60301
Surr: 1,2-Dichloroethane-d4	81.2	0	70-130		%Rec	1	5/31/2019 5:43:40 PM	R60301
Surr: 4-Bromofluorobenzene	86.5	0	70-130		%Rec	1	5/31/2019 5:43:40 PM	R60301
Surr: Dibromofluoromethane	94.9	0	70-130		%Rec	1	5/31/2019 5:43:40 PM	R60301
Surr: Toluene-d8	84.4	0	70-130		%Rec	1	5/31/2019 5:43:40 PM	R60301

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-2
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:35:00 AM
Lab ID: 1905D86-007
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.9	0.35	1.0		mg/L	1	5/31/2019 8:48:17 PM	45279
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/31/2019 8:48:17 PM	45279
Surr: DNOP	124	0	70-130		%Rec	1	5/31/2019 8:48:17 PM	45279
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.96	0.11	0.25		mg/L	5	6/6/2019 2:17:50 PM	G60459
Surr: BFB	117	0	72.8-125		%Rec	5	6/6/2019 2:17:50 PM	G60459
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	2.2	0.073	0.50		mg/L	5	5/29/2019 10:40:21 PM	R60264
Chloride	150	10	10		mg/L	20	5/29/2019 10:53:13 PM	R60264
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	5/29/2019 10:40:21 PM	R60264
Bromide	0.80	0.089	0.50		mg/L	5	5/29/2019 10:40:21 PM	R60264
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	5/29/2019 10:40:21 PM	R60264
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	5/29/2019 10:40:21 PM	R60264
Sulfate	2.0	0.33	2.5	J	mg/L	5	5/29/2019 10:40:21 PM	R60264
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.013	0.0025	0.020	J	mg/L	1	5/31/2019 5:07:06 PM	A60330
Barium	1.7	0.0032	0.010		mg/L	5	5/31/2019 5:09:18 PM	A60330
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 5:07:06 PM	A60330
Boron	0.64	0.0045	0.040		mg/L	1	5/31/2019 5:07:06 PM	A60330
Cadmium	ND	0.00055	0.0020		mg/L	1	5/31/2019 5:07:06 PM	A60330
Calcium	59	0.062	1.0		mg/L	1	5/31/2019 5:07:06 PM	A60330
Chromium	ND	0.0015	0.0060		mg/L	1	5/31/2019 5:07:06 PM	A60330
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 5:07:06 PM	A60330
Copper	ND	0.0013	0.0060		mg/L	1	5/31/2019 5:07:06 PM	A60330
Iron	0.37	0.0087	0.020	*	mg/L	1	5/31/2019 5:07:06 PM	A60330
Magnesium	11	0.050	1.0		mg/L	1	5/31/2019 5:07:06 PM	A60330
Manganese	0.78	0.00029	0.0020	*	mg/L	1	5/31/2019 5:07:06 PM	A60330
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 5:07:06 PM	A60330
Nickel	0.010	0.0040	0.010		mg/L	1	5/31/2019 5:07:06 PM	A60330
Potassium	0.25	0.16	1.0	J	mg/L	1	5/31/2019 5:07:06 PM	A60330
Silver	0.0012	0.00094	0.0050	J	mg/L	1	5/31/2019 5:07:06 PM	A60330
Sodium	310	2.1	5.0		mg/L	5	5/31/2019 5:09:18 PM	A60330
Zinc	0.016	0.0023	0.010		mg/L	1	5/31/2019 5:07:06 PM	A60330
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	4.0	0.012	0.10	*	mg/L	5	6/8/2019 4:00:48 PM	45455
Barium	1.7	0.0032	0.010		mg/L	5	6/8/2019 4:00:48 PM	45455
Beryllium	0.00030	0.00028	0.0020	J	mg/L	1	6/8/2019 3:58:49 PM	45455

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-2
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:35:00 AM
Lab ID: 1905D86-007
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Boron	0.64	0.0045	0.040		mg/L	1	6/8/2019 3:58:49 PM	45455
Cadmium	ND	0.00074	0.0020		mg/L	1	6/8/2019 3:58:49 PM	45455
Chromium	0.0015	0.0015	0.0060	J	mg/L	1	6/8/2019 3:58:49 PM	45455
Cobalt	ND	0.0031	0.0060		mg/L	1	6/8/2019 3:58:49 PM	45455
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2019 3:58:49 PM	45455
Iron	3.2	0.044	0.10	*	mg/L	5	6/8/2019 4:00:48 PM	45455
Manganese	0.75	0.00029	0.0020	*	mg/L	1	6/8/2019 3:58:49 PM	45455
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/8/2019 3:58:49 PM	45455
Nickel	0.010	0.0040	0.010		mg/L	1	6/8/2019 3:58:49 PM	45455
Silver	ND	0.0014	0.0050		mg/L	1	6/8/2019 3:58:49 PM	45455
Zinc	0.012	0.0058	0.010		mg/L	1	6/8/2019 3:58:49 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/6/2019 7:10:24 PM	C60465
Arsenic	0.0025	0.00010	0.0010		mg/L	1	6/6/2019 7:10:24 PM	C60465
Lead	ND	0.000055	0.00050		mg/L	1	6/6/2019 7:10:24 PM	C60465
Selenium	ND	0.00017	0.0010		mg/L	1	6/6/2019 7:10:24 PM	C60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 7:10:24 PM	C60465
Uranium	0.00014	0.000075	0.00050	J	mg/L	1	6/6/2019 7:10:24 PM	C60465
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/11/2019 7:03:24 PM	45455
Arsenic	0.0043	0.00031	0.0010		mg/L	1	6/11/2019 7:03:24 PM	45455
Lead	0.0020	0.000055	0.00050		mg/L	1	6/11/2019 7:03:24 PM	45455
Selenium	ND	0.00048	0.0010		mg/L	1	6/11/2019 7:03:24 PM	45455
Thallium	ND	0.000052	0.00050		mg/L	1	6/11/2019 7:03:24 PM	45455
Uranium	0.00022	0.000085	0.00050	J	mg/L	1	6/11/2019 7:03:24 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/6/2019 11:56:24 AM	45407
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	4.9	3.0	10	J	µg/L	1	6/6/2019 3:29:53 PM	45334
Acenaphthylene	ND	2.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Aniline	ND	3.6	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Anthracene	ND	2.7	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Azobenzene	ND	3.3	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Benz(a)anthracene	ND	3.6	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Benzo(a)pyrene	ND	3.5	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	6/6/2019 3:29:53 PM	45334

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CLIENT: MARATHON GALLUP
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Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:35:00 AM
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Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Benzoic acid	ND	11	20		µg/L	1	6/6/2019 3:29:53 PM	45334
Benzyl alcohol	ND	2.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	6/6/2019 3:29:53 PM	45334
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Carbazole	ND	2.9	10		µg/L	1	6/6/2019 3:29:53 PM	45334
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
4-Chloroaniline	ND	2.3	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2-Chloronaphthalene	ND	3.1	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2-Chlorophenol	ND	2.7	10		µg/L	1	6/6/2019 3:29:53 PM	45334
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Chrysene	ND	2.8	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Dibenzofuran	ND	3.2	10		µg/L	1	6/6/2019 3:29:53 PM	45334
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/6/2019 3:29:53 PM	45334
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	6/6/2019 3:29:53 PM	45334
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Diethyl phthalate	ND	2.9	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Dimethyl phthalate	ND	3.2	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	6/6/2019 3:29:53 PM	45334
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	6/6/2019 3:29:53 PM	45334
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	6/6/2019 3:29:53 PM	45334
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Fluoranthene	ND	2.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Fluorene	4.0	2.9	10	J	µg/L	1	6/6/2019 3:29:53 PM	45334
Hexachlorobenzene	ND	3.1	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Hexachlorobutadiene	ND	4.7	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Hexachloroethane	ND	4.8	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	6/6/2019 3:29:53 PM	45334

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-2
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:35:00 AM
Lab ID: 1905D86-007
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Isophorone	ND	3.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
1-Methylnaphthalene	20	3.1	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2-Methylnaphthalene	ND	3.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2-Methylphenol	ND	2.9	10		µg/L	1	6/6/2019 3:29:53 PM	45334
3+4-Methylphenol	ND	3.6	10		µg/L	1	6/6/2019 3:29:53 PM	45334
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	6/6/2019 3:29:53 PM	45334
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Naphthalene	9.4	4.1	10	J	µg/L	1	6/6/2019 3:29:53 PM	45334
2-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 3:29:53 PM	45334
3-Nitroaniline	ND	3.2	10		µg/L	1	6/6/2019 3:29:53 PM	45334
4-Nitroaniline	ND	2.7	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Nitrobenzene	ND	2.8	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2-Nitrophenol	ND	3.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
4-Nitrophenol	ND	7.6	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Pentachlorophenol	ND	2.7	20		µg/L	1	6/6/2019 3:29:53 PM	45334
Phenanthrene	ND	2.8	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Phenol	ND	8.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Pyrene	ND	2.5	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Pyridine	ND	9.6	10		µg/L	1	6/6/2019 3:29:53 PM	45334
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	6/6/2019 3:29:53 PM	45334
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	6/6/2019 3:29:53 PM	45334
Surr: 2-Fluorophenol	56.7	0	15-101		%Rec	1	6/6/2019 3:29:53 PM	45334
Surr: Phenol-d5	41.8	0	15-84.6		%Rec	1	6/6/2019 3:29:53 PM	45334
Surr: 2,4,6-Tribromophenol	78.4	0	27.8-112		%Rec	1	6/6/2019 3:29:53 PM	45334
Surr: Nitrobenzene-d5	77.9	0	33-113		%Rec	1	6/6/2019 3:29:53 PM	45334
Surr: 2-Fluorobiphenyl	73.7	0	26.6-107		%Rec	1	6/6/2019 3:29:53 PM	45334
Surr: 4-Terphenyl-d14	74.8	0	18.7-148		%Rec	1	6/6/2019 3:29:53 PM	45334
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	270	1.7	10		µg/L	10	5/31/2019 6:12:24 PM	R60301
Toluene	ND	0.35	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Ethylbenzene	45	0.13	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Methyl tert-butyl ether (MTBE)	98	0.46	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2,4-Trimethylbenzene	0.26	0.21	1.0	J	µg/L	1	5/31/2019 6:41:07 PM	R60301
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Naphthalene	11	0.28	2.0		µg/L	1	5/31/2019 6:41:07 PM	R60301

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-2
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:35:00 AM
Lab ID: 1905D86-007
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1-Methylnaphthalene	20	0.31	4.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
2-Methylnaphthalene	1.8	0.35	4.0	J	µg/L	1	5/31/2019 6:41:07 PM	R60301
Acetone	ND	1.2	10		µg/L	1	5/31/2019 6:41:07 PM	R60301
Bromobenzene	ND	0.24	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Bromoform	ND	0.29	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Bromomethane	ND	0.27	3.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
2-Butanone	ND	2.1	10		µg/L	1	5/31/2019 6:41:07 PM	R60301
Carbon disulfide	ND	0.45	10		µg/L	1	5/31/2019 6:41:07 PM	R60301
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Chloroethane	ND	0.18	2.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Chloroform	ND	0.12	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Chloromethane	ND	0.32	3.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Dibromomethane	ND	0.21	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
2-Hexanone	ND	1.5	10		µg/L	1	5/31/2019 6:41:07 PM	R60301
Isopropylbenzene	8.3	0.19	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/31/2019 6:41:07 PM	R60301
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
n-Butylbenzene	0.51	0.23	3.0	J	µg/L	1	5/31/2019 6:41:07 PM	R60301
n-Propylbenzene	3.5	0.21	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-2
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:35:00 AM
Lab ID: 1905D86-007
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
sec-Butylbenzene	1.9	0.25	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Styrene	ND	0.19	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
tert-Butylbenzene	0.29	0.21	1.0	J	µg/L	1	5/31/2019 6:41:07 PM	R60301
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/31/2019 6:41:07 PM	R60301
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/31/2019 6:41:07 PM	R60301
Surr: 1,2-Dichloroethane-d4	86.0	0	70-130		%Rec	1	5/31/2019 6:41:07 PM	R60301
Surr: 4-Bromofluorobenzene	89.3	0	70-130		%Rec	1	5/31/2019 6:41:07 PM	R60301
Surr: Dibromofluoromethane	99.2	0	70-130		%Rec	1	5/31/2019 6:41:07 PM	R60301
Surr: Toluene-d8	83.5	0	70-130		%Rec	1	5/31/2019 6:41:07 PM	R60301

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: West LDU
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:19:00 AM
Lab ID: 1905D86-008
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	7.8	0.35	1.0		mg/L	1	5/31/2019 9:10:31 PM	45279
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/31/2019 9:10:31 PM	45279
Surr: DNOP	124	0	70-130		%Rec	1	5/31/2019 9:10:31 PM	45279
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.32	0.021	0.050		mg/L	1	6/6/2019 2:41:21 PM	G60459
Surr: BFB	199	0	72.8-125	S	%Rec	1	6/6/2019 2:41:21 PM	G60459
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	4.6	0.012	0.10	*	mg/L	5	5/31/2019 5:20:22 PM	A60330
Barium	0.076	0.00065	0.0020		mg/L	1	5/31/2019 5:18:15 PM	A60330
Beryllium	0.0036	0.00028	0.0020		mg/L	1	5/31/2019 5:18:15 PM	A60330
Boron	0.48	0.0045	0.040		mg/L	1	5/31/2019 5:18:15 PM	A60330
Cadmium	ND	0.00055	0.0020		mg/L	1	5/31/2019 5:18:15 PM	A60330
Chromium	0.16	0.0015	0.0060	*	mg/L	1	5/31/2019 5:18:15 PM	A60330
Cobalt	0.0081	0.0031	0.0060		mg/L	1	5/31/2019 5:18:15 PM	A60330
Copper	ND	0.0013	0.0060		mg/L	1	5/31/2019 5:18:15 PM	A60330
Iron	750	8.7	20	*	mg/L	1000	6/3/2019 4:48:49 PM	B60357
Manganese	76	0.029	0.20	*	mg/L	100	6/3/2019 4:46:55 PM	B60357
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 5:18:15 PM	A60330
Nickel	0.52	0.0040	0.010	*	mg/L	1	5/31/2019 5:18:15 PM	A60330
Silver	ND	0.00094	0.0050		mg/L	1	5/31/2019 5:18:15 PM	A60330
Zinc	0.070	0.0023	0.010		mg/L	1	5/31/2019 5:18:15 PM	A60330
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	5.3	0.025	0.20	*	mg/L	10	6/8/2019 4:06:57 PM	45455
Barium	0.071	0.0032	0.010		mg/L	5	6/8/2019 4:05:00 PM	45455
Beryllium	0.0039	0.0014	0.010	J	mg/L	5	6/8/2019 4:05:00 PM	45455
Boron	0.50	0.023	0.20		mg/L	5	6/8/2019 4:05:00 PM	45455
Cadmium	ND	0.0037	0.010		mg/L	5	6/8/2019 4:05:00 PM	45455
Chromium	0.70	0.0077	0.030	*	mg/L	5	6/8/2019 4:05:00 PM	45455
Cobalt	ND	0.015	0.030		mg/L	5	6/8/2019 4:05:00 PM	45455
Copper	ND	0.020	0.030		mg/L	5	6/8/2019 4:05:00 PM	45455
Iron	770	8.7	20	*	mg/L	1000	6/10/2019 9:36:35 AM	45285
Manganese	76	0.029	0.20	*	mg/L	100	6/10/2019 9:34:39 AM	45285
Molybdenum	ND	0.034	0.040		mg/L	5	6/8/2019 4:05:00 PM	45455
Nickel	0.68	0.020	0.050	*	mg/L	5	6/8/2019 4:05:00 PM	45455
Silver	ND	0.0071	0.025		mg/L	5	6/8/2019 4:05:00 PM	45455
Zinc	0.16	0.029	0.050		mg/L	5	6/8/2019 4:05:00 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: West LDU
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:19:00 AM
Lab ID: 1905D86-008
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/6/2019 7:26:40 PM	D60465
Arsenic	0.00025	0.00010	0.0010	J	mg/L	1	6/6/2019 7:26:40 PM	D60465
Lead	ND	0.00027	0.0025		mg/L	5	6/10/2019 3:45:30 PM	B60533
Selenium	0.00040	0.00017	0.0010	J	mg/L	1	6/6/2019 7:26:40 PM	D60465
Thallium	ND	0.00024	0.0025		mg/L	5	6/10/2019 3:45:30 PM	B60533
Uranium	ND	0.00037	0.0025		mg/L	5	6/10/2019 3:45:30 PM	B60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	6/11/2019 7:05:35 PM	45455
Arsenic	ND	0.0016	0.0050		mg/L	5	6/11/2019 7:05:35 PM	45455
Lead	0.00040	0.00027	0.0025	J	mg/L	5	6/11/2019 7:05:35 PM	45455
Selenium	ND	0.0024	0.0050		mg/L	5	6/11/2019 7:05:35 PM	45455
Thallium	ND	0.00026	0.0025		mg/L	5	6/11/2019 7:05:35 PM	45455
Uranium	ND	0.00042	0.0025		mg/L	5	6/11/2019 7:05:35 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/6/2019 11:58:35 AM	45407
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	8.5	0.33	2.0		µg/L	2	5/31/2019 7:09:52 PM	SL6030
Toluene	ND	0.70	2.0		µg/L	2	5/31/2019 7:09:52 PM	SL6030
Ethylbenzene	4.0	0.26	2.0		µg/L	2	5/31/2019 7:09:52 PM	SL6030
Xylenes, Total	2.3	0.91	3.0	J	µg/L	2	5/31/2019 7:09:52 PM	SL6030
Surr: 1,2-Dichloroethane-d4	86.7	0	70-130		%Rec	2	5/31/2019 7:09:52 PM	SL6030
Surr: 4-Bromofluorobenzene	90.4	0	70-130		%Rec	2	5/31/2019 7:09:52 PM	SL6030
Surr: Dibromofluoromethane	95.2	0	70-130		%Rec	2	5/31/2019 7:09:52 PM	SL6030
Surr: Toluene-d8	83.5	0	70-130		%Rec	2	5/31/2019 7:09:52 PM	SL6030

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: East LDU
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:09:00 AM
Lab ID: 1905D86-009
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.4	0.35	1.0		mg/L	1	5/31/2019 9:32:34 PM	45279
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/31/2019 9:32:34 PM	45279
Surr: DNOP	121	0	70-130		%Rec	1	5/31/2019 9:32:34 PM	45279
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.4	0.11	0.25		mg/L	5	6/6/2019 3:04:56 PM	G60459
Surr: BFB	135	0	72.8-125	S	%Rec	5	6/6/2019 3:04:56 PM	G60459
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.19	0.0025	0.020		mg/L	1	5/31/2019 5:22:23 PM	A60330
Barium	0.12	0.00065	0.0020		mg/L	1	5/31/2019 5:22:23 PM	A60330
Beryllium	ND	0.00028	0.0020		mg/L	1	5/31/2019 5:22:23 PM	A60330
Boron	0.0099	0.0045	0.040	J	mg/L	1	5/31/2019 5:22:23 PM	A60330
Cadmium	ND	0.00055	0.0020		mg/L	1	5/31/2019 5:22:23 PM	A60330
Chromium	0.067	0.0015	0.0060		mg/L	1	5/31/2019 5:22:23 PM	A60330
Cobalt	ND	0.0031	0.0060		mg/L	1	5/31/2019 5:22:23 PM	A60330
Copper	ND	0.0013	0.0060		mg/L	1	5/31/2019 5:22:23 PM	A60330
Iron	1.3	0.044	0.10	*	mg/L	5	5/31/2019 5:24:30 PM	A60330
Manganese	0.83	0.00029	0.0020	*	mg/L	1	5/31/2019 5:22:23 PM	A60330
Molybdenum	ND	0.0067	0.0080		mg/L	1	5/31/2019 5:22:23 PM	A60330
Nickel	ND	0.0040	0.010		mg/L	1	5/31/2019 5:22:23 PM	A60330
Silver	0.00098	0.00094	0.0050	J	mg/L	1	5/31/2019 5:22:23 PM	A60330
Zinc	0.013	0.0023	0.010		mg/L	1	5/31/2019 5:22:23 PM	A60330
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.26	0.0025	0.020	*	mg/L	1	6/8/2019 4:10:43 PM	45455
Barium	0.12	0.00065	0.0020		mg/L	1	6/8/2019 4:10:43 PM	45455
Beryllium	ND	0.00028	0.0020		mg/L	1	6/8/2019 4:10:43 PM	45455
Boron	0.0096	0.0045	0.040	J	mg/L	1	6/8/2019 4:10:43 PM	45455
Cadmium	ND	0.00074	0.0020		mg/L	1	6/8/2019 4:10:43 PM	45455
Chromium	0.094	0.0015	0.0060		mg/L	1	6/8/2019 4:10:43 PM	45455
Cobalt	ND	0.0031	0.0060		mg/L	1	6/8/2019 4:10:43 PM	45455
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2019 4:10:43 PM	45455
Iron	1.3	0.044	0.10	*	mg/L	5	6/8/2019 4:12:45 PM	45455
Manganese	0.79	0.00029	0.0020	*	mg/L	1	6/8/2019 4:10:43 PM	45455
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/8/2019 4:10:43 PM	45455
Nickel	ND	0.0040	0.010		mg/L	1	6/8/2019 4:10:43 PM	45455
Silver	ND	0.0014	0.0050		mg/L	1	6/8/2019 4:10:43 PM	45455
Zinc	ND	0.0058	0.010		mg/L	1	6/8/2019 4:10:43 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: East LDU
Project: 2019 2nd QTR GW Samples
Collection Date: 5/28/2019 11:09:00 AM
Lab ID: 1905D86-009
Matrix: AQUEOUS
Received Date: 5/29/2019 4:25:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/6/2019 7:34:47 PM	D60465
Arsenic	ND	0.00010	0.0010		mg/L	1	6/6/2019 7:34:47 PM	D60465
Lead	ND	0.000055	0.00050		mg/L	1	6/6/2019 7:34:47 PM	D60465
Selenium	ND	0.00017	0.0010		mg/L	1	6/6/2019 7:34:47 PM	D60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 7:34:47 PM	D60465
Uranium	ND	0.000075	0.00050		mg/L	1	6/14/2019 11:43:56 AM	A60665
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/11/2019 7:07:47 PM	45455
Arsenic	ND	0.00031	0.0010		mg/L	1	6/11/2019 7:07:47 PM	45455
Lead	ND	0.000055	0.00050		mg/L	1	6/11/2019 7:07:47 PM	45455
Selenium	ND	0.00048	0.0010		mg/L	1	6/11/2019 7:07:47 PM	45455
Thallium	ND	0.000052	0.00050		mg/L	1	6/11/2019 7:07:47 PM	45455
Uranium	ND	0.000085	0.00050		mg/L	1	6/11/2019 7:07:47 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/6/2019 12:00:47 PM	45407
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	890	3.3	20		µg/L	20	5/31/2019 7:38:36 PM	SL6030
Toluene	72	0.70	2.0		µg/L	2	5/31/2019 8:07:17 PM	SL6030
Ethylbenzene	91	0.26	2.0		µg/L	2	5/31/2019 8:07:17 PM	SL6030
Xylenes, Total	56	0.91	3.0		µg/L	2	5/31/2019 8:07:17 PM	SL6030
Surr: 1,2-Dichloroethane-d4	88.7	0	70-130		%Rec	2	5/31/2019 8:07:17 PM	SL6030
Surr: 4-Bromofluorobenzene	94.6	0	70-130		%Rec	2	5/31/2019 8:07:17 PM	SL6030
Surr: Dibromofluoromethane	98.9	0	70-130		%Rec	2	5/31/2019 8:07:17 PM	SL6030
Surr: Toluene-d8	84.1	0	70-130		%Rec	2	5/31/2019 8:07:17 PM	SL6030

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A60330**	RunNo: **60330**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039310** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A60330**	RunNo: **60330**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039311** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0082	0.020	0.01000	0	81.7	50	150			J
Barium	0.0018	0.0020	0.002000	0	91.1	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	90.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.0	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	84.4	50	150			J
Calcium	0.49	1.0	0.5000	0	98.4	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.6	50	150			J
Cobalt	0.0054	0.0060	0.006000	0	90.8	50	150			J
Copper	0.0060	0.0060	0.006000	0	100	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	99.7	50	150			J
Molybdenum	0.0071	0.0080	0.008000	0	89.2	50	150			J
Nickel	0.0036	0.010	0.005000	0	71.9	50	150			J
Potassium	0.49	1.0	0.5000	0	98.6	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A60330**	RunNo: **60330**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039311** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Sodium	0.50	1.0	0.5000	0	100	50	150			J
Zinc	0.0099	0.010	0.01000	0	99.3	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A60330**	RunNo: **60330**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	102	85	115			
Barium	0.48	0.0020	0.5000	0	96.9	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.4	85	115			
Boron	0.49	0.040	0.5000	0	97.5	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.7	85	115			
Calcium	49	1.0	50.00	0	98.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.7	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.48	0.020	0.5000	0	95.3	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.48	0.0020	0.5000	0	96.0	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.49	0.010	0.5000	0	97.0	85	115			
Potassium	49	1.0	50.00	0	98.8	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Sodium	49	1.0	50.00	0	98.3	85	115			
Zinc	0.47	0.010	0.5000	0	94.0	85	115			

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040653** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040654** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.023	0.020	0.02000	0	117	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Sodium	0.58	1.0	0.5000	0	115	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.4	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Sodium	50	1.0	50.00	0	99.1	85	115			

Sample ID: **MB-45455**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45455**	RunNo: **60504**
Prep Date: **6/7/2019**	Analysis Date: **6/8/2019**	SeqNo: **2046721** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	0.0090	0.020								J
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LCS-45455**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45455**	RunNo: **60504**
Prep Date: **6/7/2019**	Analysis Date: **6/8/2019**	SeqNo: **2046722** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			
Barium	0.49	0.0020	0.5000	0	97.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LCS-45455** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45455** RunNo: **60504**
Prep Date: **6/7/2019** Analysis Date: **6/8/2019** SeqNo: **2046722** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.49	0.0020	0.5000	0	97.5	85	115			
Boron	0.49	0.040	0.5000	0	97.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.49	0.0060	0.5000	0	98.0	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.8	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	97.5	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.48	0.010	0.5000	0	97.0	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.48	0.010	0.5000	0	96.4	85	115			

Sample ID: **LLLCS-45455** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45455** RunNo: **60504**
Prep Date: **6/7/2019** Analysis Date: **6/8/2019** SeqNo: **2046723** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	113	50	150			J
Barium	0.0023	0.0020	0.002000	0	115	50	150			
Beryllium	0.0020	0.0020	0.002000	0	100	50	150			
Boron	0.041	0.040	0.04000	0	103	50	150			
Cadmium	0.0019	0.0020	0.002000	0	96.8	50	150			J
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0065	0.0060	0.006000	0	109	50	150			
Copper	0.0049	0.0060	0.006000	0	81.1	50	150			J
Iron	0.026	0.020	0.02000	0	129	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Molybdenum	0.0086	0.0080	0.008000	0	107	50	150			
Nickel	0.0055	0.010	0.005000	0	109	50	150			J
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Zinc	0.012	0.010	0.01000	0	122	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A60330**	RunNo: **60330**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039279** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A60330**	RunNo: **60330**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0082	0.020	0.01000	0	81.7	50	150			J
Barium	0.0018	0.0020	0.002000	0	91.1	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	90.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.0	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	84.4	50	150			J
Calcium	0.49	1.0	0.5000	0	98.4	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.6	50	150			J
Cobalt	0.0054	0.0060	0.006000	0	90.8	50	150			J
Copper	0.0060	0.0060	0.006000	0	100	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	99.7	50	150			J
Molybdenum	0.0071	0.0080	0.008000	0	89.2	50	150			J
Nickel	0.0036	0.010	0.005000	0	71.9	50	150			J
Potassium	0.49	1.0	0.5000	0	98.6	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A60330** RunNo: **60330**
Prep Date: Analysis Date: **5/31/2019** SeqNo: **2039280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Sodium	0.50	1.0	0.5000	0	100	50	150			J
Zinc	0.0099	0.010	0.01000	0	99.3	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A60330** RunNo: **60330**
Prep Date: Analysis Date: **5/31/2019** SeqNo: **2039281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	102	85	115			
Barium	0.48	0.0020	0.5000	0	96.9	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.4	85	115			
Boron	0.49	0.040	0.5000	0	97.5	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.7	85	115			
Calcium	49	1.0	50.00	0	98.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.7	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.48	0.020	0.5000	0	95.3	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.48	0.0020	0.5000	0	96.0	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.49	0.010	0.5000	0	97.0	85	115			
Potassium	49	1.0	50.00	0	98.8	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Sodium	49	1.0	50.00	0	98.3	85	115			
Zinc	0.47	0.010	0.5000	0	94.0	85	115			

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60357** RunNo: **60357**
Prep Date: Analysis Date: **6/3/2019** SeqNo: **2040917** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040918** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.023	0.020	0.02000	0	117	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Sodium	0.58	1.0	0.5000	0	115	50	150			J

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040919** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.4	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Sodium	50	1.0	50.00	0	99.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-45455** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45455** RunNo: **60578**
Prep Date: **6/7/2019** Analysis Date: **6/11/2019** SeqNo: **2049553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45455** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45455** RunNo: **60578**
Prep Date: **6/7/2019** Analysis Date: **6/11/2019** SeqNo: **2049555** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00069	0.0010	0.001000	0	69.0	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	99.8	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.5	50	150			J
Selenium	0.0012	0.0010	0.001000	0	119	50	150			
Thallium	0.00047	0.00050	0.0005000	0	93.0	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	92.0	50	150			J

Sample ID: **MSLCS-45455** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45455** RunNo: **60578**
Prep Date: **6/7/2019** Analysis Date: **6/11/2019** SeqNo: **2049557** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.6	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	98.5	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.013	0.00050	0.01250	0	101	85	115			
Uranium	0.012	0.00050	0.01250	0	96.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00089	0.0010	0.001000	0	88.8	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.9	50	150			J
Selenium	0.00083	0.0010	0.001000	0	83.1	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	91.9	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045357** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	96.3	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.0	85	115			
Lead	0.012	0.00050	0.01250	0	95.8	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Thallium	0.012	0.00050	0.01250	0	95.4	85	115			
Uranium	0.011	0.00050	0.01250	0	88.6	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045375** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045375** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045376** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00088	0.0010	0.001000	0	88.0	50	150			J
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.0012	0.0010	0.001000	0	120	50	150			
Thallium	0.00047	0.00050	0.0005000	0	94.5	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.1	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.6	85	115			
Lead	0.012	0.00050	0.01250	0	97.9	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Thallium	0.012	0.00050	0.01250	0	97.5	85	115			

Sample ID: **1905D86-008CMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **West LDU** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045381** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	91.5	70	130			
Arsenic	0.020	0.0010	0.02500	0.0002508	77.6	70	130			
Selenium	0.020	0.0010	0.02500	0.0003976	78.1	70	130			

Sample ID: **1905D86-008CMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **West LDU** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045382** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	91.9	70	130	0.454	20	
Arsenic	0.020	0.0010	0.02500	0.0002508	80.2	70	130	3.25	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **1905D86-008CMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **West LDU** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045382** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.019	0.0010	0.02500	0.0003976	74.6	70	130	4.44	20	

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **A60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047974** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00049	0.00050	0.0005000	0	97.8	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047976** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	94.4	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048010** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048011** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00048	0.00050	0.0005000	0	95.6	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	93.5	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B60533**	RunNo: **60533**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2048014** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	95.5	85	115			
Thallium	0.012	0.00050	0.01250	0	95.8	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A60665**	RunNo: **60665**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2052608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A60665**	RunNo: **60665**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2052609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A60665**	RunNo: **60665**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2052610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	94.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-45407**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **45407**	RunNo: **60443**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044479** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-45407**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **45407**	RunNo: **60443**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R60264** RunNo: **60264**
Prep Date: Analysis Date: **5/29/2019** SeqNo: **2036596** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R60264** RunNo: **60264**
Prep Date: Analysis Date: **5/29/2019** SeqNo: **2036597** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	105	90	110			
Chloride	4.8	0.50	5.000	0	96.5	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.5	90	110			
Bromide	2.4	0.10	2.500	0	97.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.6	90	110			
Sulfate	9.7	0.50	10.00	0	96.8	90	110			

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R60620** RunNo: **60620**
Prep Date: Analysis Date: **6/12/2019** SeqNo: **2051022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R60620** RunNo: **60620**
Prep Date: Analysis Date: **6/12/2019** SeqNo: **2051023** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **1905D86-003BMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-10** Batch ID: **45279** RunNo: **60296**
Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2039119** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	115	68.1	137			
Surr: DNOP	0.44		0.5000		88.0	70	130			

Sample ID: **1905D86-003BMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-10** Batch ID: **45279** RunNo: **60296**
Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2039120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	113	68.1	137	1.55	20	
Surr: DNOP	0.44		0.5000		87.9	70	130	0	0	

Sample ID: **LCS-45279** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **45279** RunNo: **60296**
Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2039127** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.4	71.8	135			
Surr: DNOP	0.37		0.5000		73.0	70	130			

Sample ID: **MB-45279** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW** Batch ID: **45279** RunNo: **60296**
Prep Date: **5/30/2019** Analysis Date: **5/31/2019** SeqNo: **2039128** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.91		1.000		91.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045030** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.0	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045031** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.1	77.7	130			
Surr: BFB	21		20.00		107	72.8	125			

Sample ID: **1905D86-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **KA-3**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2.9	0.25	2.500	0.4790	97.0	65.4	140			
Surr: BFB	110		100.0		112	72.8	125			

Sample ID: **1905D86-006AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **KA-3**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045034** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2.9	0.25	2.500	0.4790	95.6	65.4	140	1.28	20	
Surr: BFB	110		100.0		115	72.8	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2040029** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.9	70	130			
Toluene	18	1.0	20.00	0	90.3	70	130			
Surr: 1,2-Dichloroethane-d4	7.9		10.00		79.2	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.8	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.5	70	130			
Surr: Toluene-d8	8.4		10.00		83.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2040049** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.9		10.00		78.5	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.4	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.0	70	130			
Surr: Toluene-d8	8.3		10.00		83.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039984** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.9	70	130			
Toluene	18	1.0	20.00	0	90.3	70	130			
Chlorobenzene	19	1.0	20.00	0	93.1	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.0	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.8	70	130			
Surr: 1,2-Dichloroethane-d4	7.9		10.00		79.2	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.8	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.5	70	130			
Surr: Toluene-d8	8.4		10.00		83.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039992** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039992** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039992** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.9		10.00		78.5	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.4	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.0	70	130			
Surr: Toluene-d8	8.3		10.00		83.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **mb-45334**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **45334**	RunNo: **60472**
Prep Date: **6/3/2019**	Analysis Date: **6/6/2019**	SeqNo: **2045670** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	2.4	10								J
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **mb-45334**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **45334**	RunNo: **60472**
Prep Date: **6/3/2019**	Analysis Date: **6/6/2019**	SeqNo: **2045670** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		69.8	15	101			
Surr: Phenol-d5	100		200.0		52.0	15	84.6			
Surr: 2,4,6-Tribromophenol	180		200.0		87.7	27.8	112			
Surr: Nitrobenzene-d5	91		100.0		90.8	33	113			
Surr: 2-Fluorobiphenyl	79		100.0		79.2	26.6	107			
Surr: 4-Terphenyl-d14	86		100.0		85.6	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **lcs-45334** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **45334** RunNo: **60472**
Prep Date: **6/3/2019** Analysis Date: **6/6/2019** SeqNo: **2045671** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	99	10	100.0	0	99.3	32.2	94			S
4-Chloro-3-methylphenol	110	10	100.0	0	106	37.7	101			S
2-Chlorophenol	100	10	100.0	0	99.6	32.6	90.1			S
1,4-Dichlorobenzene	66	10	100.0	0	65.7	30	87.2			
2,4-Dinitrotoluene	97	10	100.0	0	97.0	35.9	85.8			S
N-Nitrosodi-n-propylamine	93	10	100.0	0	92.7	37.1	108			
4-Nitrophenol	63	10	100.0	0	63.3	22.4	86.6			
Pentachlorophenol	84	20	100.0	0	83.9	31.6	91			
Phenol	67	10	100.0	0	67.4	21.7	84.9			
Pyrene	99	10	100.0	0	99.0	46.3	103			
1,2,4-Trichlorobenzene	75	10	100.0	0	74.7	30.2	88.3			
Surr: 2-Fluorophenol	78		100.0		77.5	15	101			
Surr: Phenol-d5	61		100.0		61.0	15	84.6			
Surr: 2,4,6-Tribromophenol	120		100.0		119	27.8	112			S
Surr: Nitrobenzene-d5	110		100.0		105	33	113			
Surr: 2-Fluorobiphenyl	98		100.0		97.6	26.6	107			
Surr: 4-Terphenyl-d14	110		100.0		112	18.7	148			

Sample ID: **lcs-45334** SampType: **LCS4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **45334** RunNo: **60472**
Prep Date: **6/3/2019** Analysis Date: **6/6/2019** SeqNo: **2045672** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	99	10	100.0	0	99.3	48.1	117			
Acenaphthylene	97	10	100.0	0	97.0	47.8	116			
Aniline	37	10	100.0	0	37.3	15	112			
Anthracene	98	10	100.0	0	97.7	41.6	124			
Azobenzene	100	10	100.0	0	104	50	127			
Benz(a)anthracene	93	10	100.0	0	92.9	48.8	122			
Benzo(a)pyrene	110	10	100.0	0	105	53.6	127			
Benzo(b)fluoranthene	110	10	100.0	0	108	55.1	130			
Benzo(g,h,i)perylene	100	10	100.0	0	101	46.3	126			
Benzo(k)fluoranthene	100	10	100.0	0	102	55.3	127			
Benzoic acid	72	20	100.0	0	71.5	15	101			
Benzyl alcohol	100	10	100.0	0	100	38	120			
Bis(2-chloroethoxy)methane	100	10	100.0	0	105	39.4	124			
Bis(2-chloroethyl)ether	100	10	100.0	0	100	33.8	122			
Bis(2-chloroisopropyl)ether	100	10	100.0	0	100	50.4	91			S
Bis(2-ethylhexyl)phthalate	120	10	100.0	0	124	34.4	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **lcs-45334** SampType: **LCS4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **45334** RunNo: **60472**
Prep Date: **6/3/2019** Analysis Date: **6/6/2019** SeqNo: **2045672** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	98	10	100.0	0	97.6	47.2	121			
Butyl benzyl phthalate	100	10	100.0	0	101	49	125			
Carbazole	95	10	100.0	0	95.2	50.6	121			
4-Chloro-3-methylphenol	110	10	100.0	0	106	45.9	130			
4-Chloroaniline	89	10	100.0	0	89.1	41.4	123			
2-Chloronaphthalene	96	10	100.0	0	96.2	39.7	117			
2-Chlorophenol	100	10	100.0	0	99.6	33	120			
4-Chlorophenyl phenyl ether	92	10	100.0	0	92.5	52.1	115			
Chrysene	93	10	100.0	0	93.1	50.5	121			
Di-n-butyl phthalate	99	10	100.0	0	98.6	50.6	121			
Di-n-octyl phthalate	110	10	100.0	0	105	44.9	130			
Dibenz(a,h)anthracene	110	10	100.0	0	105	50.5	131			
Dibenzofuran	110	10	100.0	0	105	53.7	119			
1,2-Dichlorobenzene	70	10	100.0	0	69.5	15	93.8			
1,3-Dichlorobenzene	62	10	100.0	0	62.3	15	90.6			
1,4-Dichlorobenzene	66	10	100.0	0	65.7	15	91.6			
3,3´-Dichlorobenzidine	89	10	100.0	0	88.5	49.4	114			
Diethyl phthalate	100	10	100.0	0	102	51.8	123			
Dimethyl phthalate	110	10	100.0	0	105	53.7	123			
2,4-Dichlorophenol	95	20	100.0	0	95.2	39.8	122			
2,4-Dimethylphenol	95	10	100.0	0	94.7	40.4	117			
4,6-Dinitro-2-methylphenol	96	20	100.0	0	95.8	42.7	121			
2,4-Dinitrophenol	97	20	100.0	0	97.1	25.4	120			
2,4-Dinitrotoluene	97	10	100.0	0	97.0	50.4	124			
2,6-Dinitrotoluene	110	10	100.0	0	107	54.7	129			
Fluoranthene	100	10	100.0	0	101	54	119			
Fluorene	100	10	100.0	0	105	54.5	118			
Hexachlorobenzene	97	10	100.0	0	97.3	50.1	120			
Hexachlorobutadiene	57	10	100.0	0	57.0	15	103			
Hexachlorocyclopentadiene	59	10	100.0	0	58.7	15	104			
Hexachloroethane	58	10	100.0	0	58.4	15	94.2			
Indeno(1,2,3-cd)pyrene	110	10	100.0	0	108	49.2	129			
Isophorone	99	10	100.0	0	99.1	44.4	125			
1-Methylnaphthalene	90	10	100.0	0	89.8	34.4	118			
2-Methylnaphthalene	87	10	100.0	0	87.1	32.2	115			
2-Methylphenol	100	10	100.0	0	102	33.8	121			
3+4-Methylphenol	85	10	100.0	0	85.1	33.6	109			
N-Nitrosodi-n-propylamine	93	10	100.0	0	92.7	50.7	117			
N-Nitrosodimethylamine	89	10	100.0	0	88.9	23.8	111			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **lcs-45334**	SampType: **LCS4**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC**	Batch ID: **45334**	RunNo: **60472**
Prep Date: **6/3/2019**	Analysis Date: **6/6/2019**	SeqNo: **2045672** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	95	10	100.0	0	94.8	48.8	119			
Naphthalene	86	10	100.0	0	85.8	26.1	110			
2-Nitroaniline	110	10	100.0	0	113	52	128			
3-Nitroaniline	110	10	100.0	0	107	54.4	126			
4-Nitroaniline	100	10	100.0	0	99.8	54.9	124			
Nitrobenzene	100	10	100.0	0	100	32.4	125			
2-Nitrophenol	97	10	100.0	0	97.0	39.3	120			
4-Nitrophenol	63	10	100.0	0	63.3	20.8	87.2			
Pentachlorophenol	84	20	100.0	0	83.9	44.6	114			
Phenanthrene	98	10	100.0	0	98.2	45.7	121			
Phenol	67	10	100.0	0	67.4	15	93.2			
Pyrene	99	10	100.0	0	99.0	50.8	123			
Pyridine	16	10	100.0	0	16.4	15	67			
1,2,4-Trichlorobenzene	75	10	100.0	0	74.7	15	112			
2,4,5-Trichlorophenol	95	10	100.0	0	95.0	49.4	118			
2,4,6-Trichlorophenol	97	10	100.0	0	96.8	50.3	116			
Surr: 2-Fluorophenol	78		100.0		77.5	15	101			
Surr: Phenol-d5	61		100.0		61.0	15	84.6			
Surr: 2,4,6-Tribromophenol	120		100.0		119	27.8	112			S
Surr: Nitrobenzene-d5	110		100.0		105	33	113			
Surr: 2-Fluorobiphenyl	98		100.0		97.6	26.6	107			
Surr: 4-Terphenyl-d14	110		100.0		112	18.7	148			

Sample ID: **LCSD-45334**	SampType: **LCSD4**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC**	Batch ID: **45334**	RunNo: **60472**
Prep Date: **6/3/2019**	Analysis Date: **6/6/2019**	SeqNo: **2045673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	95	10	100.0	0	95.0	48.1	117	4.47	20	
Acenaphthylene	94	10	100.0	0	93.9	47.8	116	3.23	20	
Aniline	38	10	100.0	0	37.7	15	112	0.959	20	
Anthracene	98	10	100.0	0	97.7	41.6	124	0.0410	20	
Azobenzene	110	10	100.0	0	107	50	127	3.36	20	
Benz(a)anthracene	86	10	100.0	0	85.7	48.8	122	8.02	20	
Benzo(a)pyrene	100	10	100.0	0	104	53.6	127	1.32	20	
Benzo(b)fluoranthene	110	10	100.0	0	109	55.1	130	0.904	20	
Benzo(g,h,i)perylene	110	10	100.0	0	105	46.3	126	3.96	20	
Benzo(k)fluoranthene	100	10	100.0	0	103	55.3	127	0.487	20	
Benzoic acid	70	20	100.0	0	69.9	15	101	2.23	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LCSD-45334** SampType: **LCSD4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **45334** RunNo: **60472**
Prep Date: **6/3/2019** Analysis Date: **6/6/2019** SeqNo: **2045673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzyl alcohol	98	10	100.0	0	97.6	38	120	2.57	20	
Bis(2-chloroethoxy)methane	100	10	100.0	0	102	39.4	124	2.95	20	
Bis(2-chloroethyl)ether	100	10	100.0	0	100	33.8	122	0.220	20	
Bis(2-chloroisopropyl)ether	99	10	100.0	0	98.7	50.4	91	1.75	20	S
Bis(2-ethylhexyl)phthalate	120	10	100.0	0	121	34.4	148	2.50	20	
4-Bromophenyl phenyl ether	97	10	100.0	0	97.3	47.2	121	0.308	20	
Butyl benzyl phthalate	99	10	100.0	0	99.4	49	125	1.36	20	
Carbazole	93	10	100.0	0	93.4	50.6	121	1.89	20	
4-Chloro-3-methylphenol	110	10	100.0	0	105	45.9	130	0.719	20	
4-Chloroaniline	94	10	100.0	0	94.2	41.4	123	5.52	20	
2-Chloronaphthalene	92	10	100.0	0	91.6	39.7	117	4.84	20	
2-Chlorophenol	98	10	100.0	0	98.2	33	120	1.42	20	
4-Chlorophenyl phenyl ether	93	10	100.0	0	92.8	52.1	115	0.367	20	
Chrysene	90	10	100.0	0	89.8	50.5	121	3.52	20	
Di-n-butyl phthalate	97	10	100.0	0	96.8	50.6	121	1.84	20	
Di-n-octyl phthalate	100	10	100.0	0	100	44.9	130	5.06	20	
Dibenz(a,h)anthracene	110	10	100.0	0	105	50.5	131	0.209	20	
Dibenzofuran	100	10	100.0	0	101	53.7	119	3.60	20	
1,2-Dichlorobenzene	68	10	100.0	0	68.1	15	93.8	2.03	20	
1,3-Dichlorobenzene	62	10	100.0	0	62.0	15	90.6	0.515	20	
1,4-Dichlorobenzene	64	10	100.0	0	64.0	15	91.6	2.53	20	
3,3´-Dichlorobenzidine	77	10	100.0	0	77.4	49.4	114	13.4	20	
Diethyl phthalate	100	10	100.0	0	99.8	51.8	123	2.39	20	
Dimethyl phthalate	100	10	100.0	0	104	53.7	123	1.07	20	
2,4-Dichlorophenol	96	20	100.0	0	96.0	39.8	122	0.836	20	
2,4-Dimethylphenol	95	10	100.0	0	94.9	40.4	117	0.190	20	
4,6-Dinitro-2-methylphenol	94	20	100.0	0	93.9	42.7	121	2.00	20	
2,4-Dinitrophenol	94	20	100.0	0	94.1	25.4	120	3.08	20	
2,4-Dinitrotoluene	98	10	100.0	0	97.8	50.4	124	0.863	20	
2,6-Dinitrotoluene	110	10	100.0	0	111	54.7	129	3.34	20	
Fluoranthene	110	10	100.0	0	105	54	119	4.05	20	
Fluorene	100	10	100.0	0	104	54.5	118	0.729	20	
Hexachlorobenzene	96	10	100.0	0	95.7	50.1	120	1.70	20	
Hexachlorobutadiene	56	10	100.0	0	56.2	15	103	1.34	20	
Hexachlorocyclopentadiene	58	10	100.0	0	57.6	15	104	1.89	20	
Hexachloroethane	57	10	100.0	0	57.4	15	94.2	1.76	20	
Indeno(1,2,3-cd)pyrene	110	10	100.0	0	107	49.2	129	0.746	20	
Isophorone	98	10	100.0	0	98.1	44.4	125	0.953	20	
1-Methylnaphthalene	90	10	100.0	0	89.7	34.4	118	0.201	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905D86**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LCSD-45334** SampType: **LCSD4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **45334** RunNo: **60472**
Prep Date: **6/3/2019** Analysis Date: **6/6/2019** SeqNo: **2045673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylnaphthalene	87	10	100.0	0	87.5	32.2	115	0.481	20	
2-Methylphenol	100	10	100.0	0	101	33.8	121	1.52	20	
3+4-Methylphenol	91	10	100.0	0	90.8	33.6	109	6.48	20	
N-Nitrosodi-n-propylamine	97	10	100.0	0	97.0	50.7	117	4.49	20	
N-Nitrosodimethylamine	86	10	100.0	0	86.0	23.8	111	3.29	20	
N-Nitrosodiphenylamine	94	10	100.0	0	93.8	48.8	119	1.04	20	
Naphthalene	85	10	100.0	0	85.4	26.1	110	0.467	20	
2-Nitroaniline	110	10	100.0	0	110	52	128	2.83	20	
3-Nitroaniline	100	10	100.0	0	104	54.4	126	2.87	20	
4-Nitroaniline	98	10	100.0	0	98.5	54.9	124	1.35	20	
Nitrobenzene	98	10	100.0	0	97.9	32.4	125	2.14	20	
2-Nitrophenol	99	10	100.0	0	98.8	39.3	120	1.86	20	
4-Nitrophenol	59	10	100.0	0	59.0	20.8	87.2	7.00	20	
Pentachlorophenol	84	20	100.0	0	84.0	44.6	114	0.143	20	
Phenanthrene	92	10	100.0	0	92.4	45.7	121	6.15	20	
Phenol	66	10	100.0	0	66.0	15	93.2	2.10	20	
Pyrene	95	10	100.0	0	94.8	50.8	123	4.42	20	
Pyridine	15	10	100.0	0	15.5	15	67	6.14	20	
1,2,4-Trichlorobenzene	75	10	100.0	0	75.0	15	112	0.454	20	
2,4,5-Trichlorophenol	88	10	100.0	0	88.4	49.4	118	7.20	20	
2,4,6-Trichlorophenol	92	10	100.0	0	92.4	50.3	116	4.65	20	
Surr: 2-Fluorophenol	75		100.0		75.4	15	101	0		
Surr: Phenol-d5	58		100.0		58.5	15	84.6	0		
Surr: 2,4,6-Tribromophenol	120		100.0		116	27.8	112	0		S
Surr: Nitrobenzene-d5	100		100.0		102	33	113	0		
Surr: 2-Fluorobiphenyl	97		100.0		96.7	26.6	107	0		
Surr: 4-Terphenyl-d14	110		100.0		110	18.7	148	0		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1905D86 RcptNo: 1

Received By: **Erin Melendrez** 5/29/2019 4:25:00 PM

Completed By: **Erin Melendrez** 5/29/2019 4:55:58 PM

Reviewed By: (unpres.) VV 5/29/19 TO 5/30/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preserved added to bottles? Yes ☑ No ~~☑~~ DAD 5/30/19 NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑

11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 19 (<2 or >12 unless noted)

Adjusted? YES

Checked by: DAD 5/30/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Cheryl Johnson Date: 5/30/19

By Whom: Leah Baca Via: ☒ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: Missing Sample VOAs for -003 → 005, NO COD Bottles

Client Instructions: The missing VOAs will arrive 5/30/19 and COD is unnecessary

16. Additional remarks: Added approx. 0.4mL. HNO_3 to samples 003 & 004 for pH < 2.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			
2	3.1	Good	Yes			

Chain-of-Custody Record

Client:	MARATHON - WESTERN REFINING SW
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road, Gallup, NM 87301
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard X Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other ☐ EDD (Type)

Turn-Around Time:	X Standard ☐ Rush
Project Name:	2019 2ND QTR GW SAMPLES
Project #:	OW-10, NAPIS, LDU(2), STP1 TO EP-2
Project Manager:	Brian Moore
Sampler:	C. JOHNSON (CAJohnson1@marathonpetroleum.com)
On Ice:	☑ Yes ☐ No
Sample Temperature:	5.6 - 0.1(CF) = 5.5°C; 3.2 - 0.1(CF) = 3.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1905D86	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS	8011 FOR EDB	8021B (BTEX)	BOD	COD	TDS	TSS			Air Bubbles (Y or N)
Analysis Request																					
5/28/2019	700	aqueous	FIELD BLANK	3-40ML VOAS	HCL	-001	X														
5/28/2019	700	aqueous	TRIP BLANK	3-40ML VOAS	HCL	-002	X														
5/28/2019	1440	aqueous	OW-10	Misc	Misc	-003	~~X~~	X	X	X	X	X	~~X~~								
5/28/2019	1450	aqueous	DUPLICATE	Misc	Misc	-004	~~X~~	X	X	X	X	X	~~X~~								
5/28/2019	1210	aqueous	NAPIS-3	Misc	Misc	-005	~~X~~	X	X	X	X	X	~~X~~								
5/28/2019	1155	aqueous	KA-3	Misc	Misc	-006	X	X	X	X	2	X									
5/28/2019	1135	aqueous	NAPIS-2	Misc	Misc	-007	X	X	X	X	X	X									
5/28/2019	1119	aqueous	WEST LDU	Misc	Misc	-008		X	X	X				X		X					
5/28/2019	1109	aqueous	EAST LDU	Misc	Misc	-009		X	X	X				X		X					
~~5/29/2019~~	~~1125~~	~~aqueous~~	STP1 TO EP-2	Misc	Misc	-010	X	X	X	X					X	X	X	X			
			Sample not received EMH 5/29/19																		

Did Not received VOAs for -003 & 005 See 1905E46 LB 5/31/19

Not required per Chelsey Johnson LB 5/31/19

Date:	Time:	Relinquished by:	Received by:	Date Time	Remarks:
5/29/19	1300			5/29/19 1410	
5/29/19	1625			5/29/19 1625	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 17, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 2ND QTR GW Samples OrderNo.: 1905E66

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 4 sample(s) on 5/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 2ND QTR GW Samples
Collection Date: 5/28/2019 2:40:00 PM
Lab ID: 1905E66-001
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	6/6/2019 11:55:04 AM	45415
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	6/6/2019 3:28:33 PM	G60459
Surr: BFB	94.3	0	72.8-125		%Rec	1	6/6/2019 3:28:33 PM	G60459
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Toluene	ND	0.35	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Methyl tert-butyl ether (MTBE)	9.2	0.46	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Naphthalene	ND	0.28	2.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Acetone	ND	1.2	10		µg/L	1	5/31/2019 8:35:54 PM	R60301
Bromobenzene	ND	0.24	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Bromoform	ND	0.29	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Bromomethane	ND	0.27	3.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
2-Butanone	ND	2.1	10		µg/L	1	5/31/2019 8:35:54 PM	R60301
Carbon disulfide	ND	0.45	10		µg/L	1	5/31/2019 8:35:54 PM	R60301
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Chloroethane	ND	0.18	2.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Chloroform	ND	0.12	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Chloromethane	ND	0.32	3.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Dibromomethane	ND	0.21	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 2ND QTR GW Samples
Collection Date: 5/28/2019 2:40:00 PM
Lab ID: 1905E66-001
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,1-Dichloroethane	0.55	0.14	1.0	J	µg/L	1	5/31/2019 8:35:54 PM	R60301
1,1-Dichloroethene	0.38	0.21	1.0	J	µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
2-Hexanone	ND	1.5	10		µg/L	1	5/31/2019 8:35:54 PM	R60301
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/31/2019 8:35:54 PM	R60301
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Styrene	ND	0.19	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/31/2019 8:35:54 PM	R60301
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/31/2019 8:35:54 PM	R60301
Surr: 1,2-Dichloroethane-d4	81.6	0	70-130		%Rec	1	5/31/2019 8:35:54 PM	R60301
Surr: 4-Bromofluorobenzene	85.9	0	70-130		%Rec	1	5/31/2019 8:35:54 PM	R60301
Surr: Dibromofluoromethane	94.2	0	70-130		%Rec	1	5/31/2019 8:35:54 PM	R60301
Surr: Toluene-d8	83.6	0	70-130		%Rec	1	5/31/2019 8:35:54 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/28/2019 2:50:00 PM
Lab ID: 1905E66-002
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	6/6/2019 12:09:56 PM	45415
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	6/6/2019 3:52:13 PM	G60459
Surr: BFB	95.7	0	72.8-125		%Rec	1	6/6/2019 3:52:13 PM	G60459
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Toluene	ND	0.35	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Methyl tert-butyl ether (MTBE)	9.1	0.46	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Naphthalene	ND	0.28	2.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Acetone	ND	1.2	10		µg/L	1	5/31/2019 10:01:51 PM	R60301
Bromobenzene	ND	0.24	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Bromoform	ND	0.29	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Bromomethane	ND	0.27	3.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
2-Butanone	ND	2.1	10		µg/L	1	5/31/2019 10:01:51 PM	R60301
Carbon disulfide	ND	0.45	10		µg/L	1	5/31/2019 10:01:51 PM	R60301
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Chloroethane	ND	0.18	2.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Chloroform	ND	0.12	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Chloromethane	ND	0.32	3.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Dibromomethane	ND	0.21	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 5/28/2019 2:50:00 PM
Lab ID: 1905E66-002
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,1-Dichloroethane	0.56	0.14	1.0	J	µg/L	1	5/31/2019 10:01:51 PM	R60301
1,1-Dichloroethene	0.39	0.21	1.0	J	µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
2-Hexanone	ND	1.5	10		µg/L	1	5/31/2019 10:01:51 PM	R60301
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/31/2019 10:01:51 PM	R60301
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Styrene	ND	0.19	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/31/2019 10:01:51 PM	R60301
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/31/2019 10:01:51 PM	R60301
Surr: 1,2-Dichloroethane-d4	81.4	0	70-130		%Rec	1	5/31/2019 10:01:51 PM	R60301
Surr: 4-Bromofluorobenzene	89.4	0	70-130		%Rec	1	5/31/2019 10:01:51 PM	R60301
Surr: Dibromofluoromethane	93.0	0	70-130		%Rec	1	5/31/2019 10:01:51 PM	R60301
Surr: Toluene-d8	83.2	0	70-130		%Rec	1	5/31/2019 10:01:51 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-3
Project: 2019 2ND QTR GW Samples
Collection Date: 5/28/2019 12:10:00 PM
Lab ID: 1905E66-003
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	6/6/2019 12:24:48 PM	45415
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.022	0.021	0.050	J	mg/L	1	6/6/2019 4:15:47 PM	G60459
Surr: BFB	97.6	0	72.8-125		%Rec	1	6/6/2019 4:15:47 PM	G60459
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Toluene	ND	0.35	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Ethylbenzene	ND	0.13	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Methyl tert-butyl ether (MTBE)	31	0.46	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Naphthalene	ND	0.28	2.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Acetone	11	1.2	10		µg/L	1	5/31/2019 10:59:06 PM	R60301
Bromobenzene	ND	0.24	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Bromodichloromethane	ND	0.13	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Bromoform	ND	0.29	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Bromomethane	ND	0.27	3.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
2-Butanone	ND	2.1	10		µg/L	1	5/31/2019 10:59:06 PM	R60301
Carbon disulfide	ND	0.45	10		µg/L	1	5/31/2019 10:59:06 PM	R60301
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Chlorobenzene	ND	0.19	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Chloroethane	ND	0.18	2.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Chloroform	ND	0.12	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Chloromethane	ND	0.32	3.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Dibromochloromethane	ND	0.24	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Dibromomethane	ND	0.21	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: NAPIS-3
Project: 2019 2ND QTR GW Samples
Collection Date: 5/28/2019 12:10:00 PM
Lab ID: 1905E66-003
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
2-Hexanone	ND	1.5	10		µg/L	1	5/31/2019 10:59:06 PM	R60301
Isopropylbenzene	ND	0.19	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/31/2019 10:59:06 PM	R60301
Methylene Chloride	ND	0.15	3.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
n-Butylbenzene	ND	0.23	3.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
n-Propylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Styrene	ND	0.19	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/31/2019 10:59:06 PM	R60301
Xylenes, Total	ND	0.45	1.5		µg/L	1	5/31/2019 10:59:06 PM	R60301
Surr: 1,2-Dichloroethane-d4	81.0	0	70-130		%Rec	1	5/31/2019 10:59:06 PM	R60301
Surr: 4-Bromofluorobenzene	88.2	0	70-130		%Rec	1	5/31/2019 10:59:06 PM	R60301
Surr: Dibromofluoromethane	95.1	0	70-130		%Rec	1	5/31/2019 10:59:06 PM	R60301
Surr: Toluene-d8	82.7	0	70-130		%Rec	1	5/31/2019 10:59:06 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1 to EP-2
Project: 2019 2ND QTR GW Samples
Collection Date: 5/29/2019 11:25:00 AM
Lab ID: 1905E66-004 **Matrix:** AQUEOUS **Received Date:** 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.1	0.35	1.0		mg/L	1	6/6/2019 2:50:24 PM	45397
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	6/6/2019 2:50:24 PM	45397
Surr: DNOP	119	0	70-130		%Rec	1	6/6/2019 2:50:24 PM	45397
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.42	1.0	D	mg/L	20	6/6/2019 4:39:23 PM	G60459
Surr: BFB	97.0	0	72.8-125	D	%Rec	20	6/6/2019 4:39:23 PM	G60459
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.32	0.012	0.10	*	mg/L	5	6/3/2019 9:52:23 PM	C60357
Barium	0.25	0.0032	0.010		mg/L	5	6/3/2019 9:52:23 PM	C60357
Beryllium	ND	0.0014	0.010		mg/L	5	6/3/2019 9:52:23 PM	C60357
Boron	0.41	0.023	0.20		mg/L	5	6/3/2019 9:52:23 PM	C60357
Cadmium	ND	0.0028	0.010		mg/L	5	6/3/2019 9:52:23 PM	C60357
Chromium	ND	0.0077	0.030		mg/L	5	6/3/2019 9:52:23 PM	C60357
Cobalt	ND	0.015	0.030		mg/L	5	6/3/2019 9:52:23 PM	C60357
Copper	ND	0.0065	0.030		mg/L	5	6/3/2019 9:52:23 PM	C60357
Iron	1.8	0.044	0.10	*	mg/L	5	6/3/2019 9:52:23 PM	C60357
Manganese	0.22	0.0014	0.010	*	mg/L	5	6/3/2019 9:52:23 PM	C60357
Molybdenum	ND	0.034	0.040		mg/L	5	6/3/2019 9:52:23 PM	C60357
Nickel	ND	0.020	0.050		mg/L	5	6/3/2019 9:52:23 PM	C60357
Silver	ND	0.0047	0.025		mg/L	5	6/3/2019 9:52:23 PM	C60357
Zinc	0.033	0.011	0.050	J	mg/L	5	6/3/2019 9:52:23 PM	C60357
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	0.43	0.012	0.10	*	mg/L	5	6/8/2019 4:38:01 PM	45455
Barium	0.26	0.0032	0.010		mg/L	5	6/8/2019 4:38:01 PM	45455
Beryllium	ND	0.0014	0.010		mg/L	5	6/8/2019 4:38:01 PM	45455
Boron	0.43	0.023	0.20		mg/L	5	6/8/2019 4:38:01 PM	45455
Cadmium	ND	0.0037	0.010		mg/L	5	6/8/2019 4:38:01 PM	45455
Chromium	ND	0.0077	0.030		mg/L	5	6/8/2019 4:38:01 PM	45455
Cobalt	ND	0.015	0.030		mg/L	5	6/8/2019 4:38:01 PM	45455
Copper	ND	0.020	0.030		mg/L	5	6/8/2019 4:38:01 PM	45455
Iron	1.9	0.044	0.10	*	mg/L	5	6/8/2019 4:38:01 PM	45455
Manganese	0.23	0.0014	0.010	*	mg/L	5	6/8/2019 4:38:01 PM	45455
Molybdenum	ND	0.034	0.040		mg/L	5	6/8/2019 4:38:01 PM	45455
Nickel	ND	0.020	0.050		mg/L	5	6/8/2019 4:38:01 PM	45455
Silver	ND	0.0071	0.025		mg/L	5	6/8/2019 4:38:01 PM	45455
Zinc	ND	0.029	0.050		mg/L	5	6/8/2019 4:38:01 PM	45455
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1 to EP-2
Project: 2019 2ND QTR GW Samples
Collection Date: 5/29/2019 11:25:00 AM
Lab ID: 1905E66-004
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00081	0.00039	0.0010	J	mg/L	1	6/10/2019 4:58:27 PM	B60533
Arsenic	0.0069	0.00010	0.0010		mg/L	1	6/10/2019 4:58:27 PM	B60533
Lead	ND	0.000055	0.00050		mg/L	1	6/10/2019 4:58:27 PM	B60533
Selenium	0.0084	0.00017	0.0010		mg/L	1	6/10/2019 4:58:27 PM	B60533
Thallium	ND	0.000048	0.00050		mg/L	1	6/10/2019 4:58:27 PM	B60533
Uranium	0.00042	0.000075	0.00050	J	mg/L	1	6/10/2019 4:58:27 PM	B60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	6/11/2019 7:25:22 PM	45455
Arsenic	0.0082	0.0016	0.0050		mg/L	5	6/11/2019 7:25:22 PM	45455
Lead	ND	0.00027	0.0025		mg/L	5	6/11/2019 7:25:22 PM	45455
Selenium	0.0055	0.0024	0.0050		mg/L	5	6/11/2019 7:25:22 PM	45455
Thallium	ND	0.00026	0.0025		mg/L	5	6/11/2019 7:25:22 PM	45455
Uranium	0.00065	0.00042	0.0025	J	mg/L	5	6/11/2019 7:25:22 PM	45455
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/13/2019 3:39:10 PM	45564
SM5210B: BOD							Analyst: **AG**	
Biochemical Oxygen Demand	1100	2.0	2.0	R	mg/L	1	6/5/2019 2:48:00 PM	45294
NOTES: R-RPD between dilutions is >30%.								
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	3.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Toluene	ND	7.0	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Ethylbenzene	ND	2.6	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Methyl tert-butyl ether (MTBE)	ND	9.1	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2,4-Trimethylbenzene	ND	4.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,3,5-Trimethylbenzene	ND	3.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2-Dichloroethane (EDC)	ND	3.9	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2-Dibromoethane (EDB)	ND	3.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Naphthalene	ND	5.5	40	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1-Methylnaphthalene	ND	6.3	80	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
2-Methylnaphthalene	ND	6.9	80	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Acetone	760	24	200	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Bromobenzene	ND	4.9	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Bromodichloromethane	ND	2.7	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Bromoform	ND	5.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Bromomethane	ND	5.5	60	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
2-Butanone	46	42	200	JD	µg/L	20	5/31/2019 11:27:46 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1 to EP-2
Project: 2019 2ND QTR GW Samples
Collection Date: 5/29/2019 11:25:00 AM
Lab ID: 1905E66-004
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Carbon disulfide	ND	9.1	200	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Carbon Tetrachloride	ND	2.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Chlorobenzene	ND	3.9	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Chloroethane	ND	3.6	40	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Chloroform	ND	2.4	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Chloromethane	ND	6.4	60	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
2-Chlorotoluene	ND	4.9	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
4-Chlorotoluene	ND	4.7	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
cis-1,2-DCE	ND	3.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
cis-1,3-Dichloropropene	ND	2.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2-Dibromo-3-chloropropane	ND	6.5	40	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Dibromochloromethane	ND	4.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Dibromomethane	ND	4.2	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2-Dichlorobenzene	ND	5.9	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,3-Dichlorobenzene	ND	5.0	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,4-Dichlorobenzene	ND	5.9	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Dichlorodifluoromethane	ND	5.2	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,1-Dichloroethane	ND	2.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,1-Dichloroethene	ND	4.1	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2-Dichloropropane	ND	4.2	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,3-Dichloropropane	ND	4.0	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
2,2-Dichloropropane	ND	4.7	40	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,1-Dichloropropene	ND	3.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Hexachlorobutadiene	ND	6.2	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
2-Hexanone	ND	31	200	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Isopropylbenzene	ND	3.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
4-Isopropyltoluene	ND	4.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
4-Methyl-2-pentanone	ND	14	200	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Methylene Chloride	ND	3.1	60	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
n-Butylbenzene	ND	4.6	60	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
n-Propylbenzene	ND	4.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
sec-Butylbenzene	ND	5.0	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Styrene	ND	3.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
tert-Butylbenzene	ND	4.1	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,1,1,2-Tetrachloroethane	ND	4.1	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,1,2,2-Tetrachloroethane	ND	11	40	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Tetrachloroethene (PCE)	ND	3.0	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
trans-1,2-DCE	ND	3.6	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
trans-1,3-Dichloropropene	ND	3.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1 to EP-2
Project: 2019 2ND QTR GW Samples
Collection Date: 5/29/2019 11:25:00 AM
Lab ID: 1905E66-004
Matrix: AQUEOUS
Received Date: 5/30/2019 4:14:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichlorobenzene	ND	6.0	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2,4-Trichlorobenzene	ND	3.9	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,1,1-Trichloroethane	ND	3.5	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,1,2-Trichloroethane	ND	4.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Trichloroethene (TCE)	ND	3.3	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Trichlorofluoromethane	ND	3.8	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
1,2,3-Trichloropropane	ND	5.9	40	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Vinyl chloride	ND	3.6	20	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Xylenes, Total	ND	9.1	30	D	µg/L	20	5/31/2019 11:27:46 PM	R60301
Surr: 1,2-Dichloroethane-d4	79.8	0	70-130	D	%Rec	20	5/31/2019 11:27:46 PM	R60301
Surr: 4-Bromofluorobenzene	86.8	0	70-130	D	%Rec	20	5/31/2019 11:27:46 PM	R60301
Surr: Dibromofluoromethane	92.6	0	70-130	D	%Rec	20	5/31/2019 11:27:46 PM	R60301
Surr: Toluene-d8	83.9	0	70-130	D	%Rec	20	5/31/2019 11:27:46 PM	R60301
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	4350	200	200	*D	mg/L	1	6/4/2019 4:51:00 PM	45316
SM 2540D: TSS							Analyst: **KS**	
Suspended Solids	36	4.0	4.0		mg/L	1	6/5/2019 2:50:00 PM	45361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1590		50.0	5	06/08/2019 12:25	WG1290867

Method Blank (MB)

(MB) R3419145-1 06/08/19 12:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1098938-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1098938-01 06/08/19 12:22 • (DUP) R3419145-3 06/08/19 12:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	590	591	1	0.295		20

L1101302-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1101302-01 06/08/19 12:22 • (DUP) R3419145-4 06/08/19 12:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	1280	1280	5	0.219		20

L1104393-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1104393-02 06/08/19 12:25 • (DUP) R3419145-5 06/08/19 12:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	14.5	12.5	1	15.4		20

Laboratory Control Sample (LCS)

(LCS) R3419145-2 06/08/19 12:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	213	95.8	90.0-110	

L1104557-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1104557-01 06/08/19 12:26 • (MS) R3419145-6 06/08/19 12:27 • (MSD) R3419145-7 06/08/19 12:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	62.9	511	512	112	112	1	80.0-120			0.188	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **C60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **C60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040663** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0080	0.020	0.01000	0	79.7	50	150			J
Barium	0.0020	0.0020	0.002000	0	99.3	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0025	0.0020	0.002000	0	123	50	150			
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0047	0.0060	0.006000	0	78.8	50	150			J
Copper	0.0051	0.0060	0.006000	0	85.6	50	150			J
Iron	0.021	0.020	0.02000	0	103	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0099	0.0080	0.008000	0	123	50	150			
Nickel	0.0031	0.010	0.005000	0	62.1	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.0	50	150			J
Zinc	0.011	0.010	0.01000	0	111	50	150			

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **C60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-C** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **C60357** RunNo: **60357**
Prep Date: Analysis Date: **6/3/2019** SeqNo: **2040665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	102	85	115			
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.4	85	115			
Boron	0.48	0.040	0.5000	0	95.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Cobalt	0.48	0.0060	0.5000	0	97.0	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.49	0.020	0.5000	0	97.2	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.4	85	115			
Nickel	0.48	0.010	0.5000	0	96.5	85	115			
Silver	0.097	0.0050	0.1000	0	97.4	85	115			
Zinc	0.49	0.010	0.5000	0	98.3	85	115			

Sample ID: **MB-45455** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45455** RunNo: **60504**
Prep Date: **6/7/2019** Analysis Date: **6/8/2019** SeqNo: **2046721** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	0.0090	0.020								J
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LCS-45455** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45455** RunNo: **60504**
Prep Date: **6/7/2019** Analysis Date: **6/8/2019** SeqNo: **2046722** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45455** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45455** RunNo: **60504**
Prep Date: **6/7/2019** Analysis Date: **6/8/2019** SeqNo: **2046722** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			
Barium	0.49	0.0020	0.5000	0	97.8	85	115			
Beryllium	0.49	0.0020	0.5000	0	97.5	85	115			
Boron	0.49	0.040	0.5000	0	97.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.49	0.0060	0.5000	0	98.0	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.8	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	97.5	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.48	0.010	0.5000	0	97.0	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.48	0.010	0.5000	0	96.4	85	115			

Sample ID: **LLLCS-45455** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45455** RunNo: **60504**
Prep Date: **6/7/2019** Analysis Date: **6/8/2019** SeqNo: **2046723** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	113	50	150			J
Barium	0.0023	0.0020	0.002000	0	115	50	150			
Beryllium	0.0020	0.0020	0.002000	0	100	50	150			
Boron	0.041	0.040	0.04000	0	103	50	150			
Cadmium	0.0019	0.0020	0.002000	0	96.8	50	150			J
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0065	0.0060	0.006000	0	109	50	150			
Copper	0.0049	0.0060	0.006000	0	81.1	50	150			J
Iron	0.026	0.020	0.02000	0	129	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Molybdenum	0.0086	0.0080	0.008000	0	107	50	150			
Nickel	0.0055	0.010	0.005000	0	109	50	150			J
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Zinc	0.012	0.010	0.01000	0	122	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040920** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040921** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0080	0.020	0.01000	0	79.7	50	150			J
Barium	0.0020	0.0020	0.002000	0	99.3	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0025	0.0020	0.002000	0	123	50	150			
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Cobalt	0.0047	0.0060	0.006000	0	78.8	50	150			J
Copper	0.0051	0.0060	0.006000	0	85.6	50	150			J
Iron	0.021	0.020	0.02000	0	103	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Molybdenum	0.0099	0.0080	0.008000	0	123	50	150			
Nickel	0.0031	0.010	0.005000	0	62.1	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.0	50	150			J
Zinc	0.011	0.010	0.01000	0	111	50	150			

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C60357**	RunNo: **60357**
Prep Date:	Analysis Date: **6/3/2019**	SeqNo: **2040922** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-C** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C60357** RunNo: **60357**
Prep Date: Analysis Date: **6/3/2019** SeqNo: **2040922** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	102	85	115			
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.4	85	115			
Boron	0.48	0.040	0.5000	0	95.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Cobalt	0.48	0.0060	0.5000	0	97.0	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.49	0.020	0.5000	0	97.2	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.4	85	115			
Nickel	0.48	0.010	0.5000	0	96.5	85	115			
Silver	0.097	0.0050	0.1000	0	97.4	85	115			
Zinc	0.49	0.010	0.5000	0	98.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45455** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45455** RunNo: **60578**
Prep Date: **6/7/2019** Analysis Date: **6/11/2019** SeqNo: **2049553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45455** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45455** RunNo: **60578**
Prep Date: **6/7/2019** Analysis Date: **6/11/2019** SeqNo: **2049555** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00069	0.0010	0.001000	0	69.0	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	99.8	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.5	50	150			J
Selenium	0.0012	0.0010	0.001000	0	119	50	150			
Thallium	0.00047	0.00050	0.0005000	0	93.0	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	92.0	50	150			J

Sample ID: **MSLCS-45455** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45455** RunNo: **60578**
Prep Date: **6/7/2019** Analysis Date: **6/11/2019** SeqNo: **2049557** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.6	85	115			
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	98.5	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.013	0.00050	0.01250	0	101	85	115			
Uranium	0.012	0.00050	0.01250	0	96.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048010** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048011** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00094	0.0010	0.001000	0	94.2	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00048	0.00050	0.0005000	0	95.6	50	150			J
Selenium	0.0011	0.0010	0.001000	0	108	50	150			
Thallium	0.00047	0.00050	0.0005000	0	93.5	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048014** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.6	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.012	0.00050	0.01250	0	95.5	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.012	0.00050	0.01250	0	95.8	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45564**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **45564**	RunNo: **60638**
Prep Date: **6/13/2019**	Analysis Date: **6/13/2019**	SeqNo: **2051527** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-45564**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **45564**	RunNo: **60638**
Prep Date: **6/13/2019**	Analysis Date: **6/13/2019**	SeqNo: **2051528** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45415** SampType: **LCS** TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW** Batch ID: **45415** RunNo: **60461**
Prep Date: **6/6/2019** Analysis Date: **6/6/2019** SeqNo: **2045157** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.098	0.010	0.1000	0	97.6	70	130			

Sample ID: **MB-45415** SampType: **MBLK** TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW** Batch ID: **45415** RunNo: **60461**
Prep Date: **6/6/2019** Analysis Date: **6/6/2019** SeqNo: **2045158** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45397**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **45397**	RunNo: **60436**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	104	71.8	135			
Surr: DNOP	0.49		0.5000		97.8	70	130			

Sample ID: **MB-45397**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **45397**	RunNo: **60436**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		114	70	130			

Sample ID: **1905E66-004BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1 to EP-2**	Batch ID: **45397**	RunNo: **60436**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044920** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	7.8	1.0	5.000	2.127	113	68.1	137			
Surr: DNOP	0.60		0.5000		121	70	130			

Sample ID: **1905E66-004BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1 to EP-2**	Batch ID: **45397**	RunNo: **60436**
Prep Date: **6/5/2019**	Analysis Date: **6/6/2019**	SeqNo: **2044921** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	7.3	1.0	5.000	2.127	104	68.1	137	5.76	20	
Surr: DNOP	0.54		0.5000		109	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045030** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.0	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045031** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.1	77.7	130			
Surr: BFB	21		20.00		107	72.8	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039984** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.9	70	130			
Toluene	18	1.0	20.00	0	90.3	70	130			
Chlorobenzene	19	1.0	20.00	0	93.1	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.0	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.8	70	130			
Surr: 1,2-Dichloroethane-d4	7.9		10.00		79.2	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.8	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.5	70	130			
Surr: Toluene-d8	8.4		10.00		83.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039992** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039992** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**

17-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2039992** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.9		10.00		78.5	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.4	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.0	70	130			
Surr: Toluene-d8	8.3		10.00		83.5	70	130			

Sample ID: **1905e66-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-10**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2040113** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.1	70	130			
Toluene	18	1.0	20.00	0	89.1	70	130			
Chlorobenzene	18	1.0	20.00	0	91.8	70	130			
1,1-Dichloroethene	18	1.0	20.00	0.3794	89.6	67.6	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		81.2	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.7	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	8.2		10.00		81.7	70	130			

Sample ID: **1905e66-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-10**	Batch ID: **R60301**	RunNo: **60301**
Prep Date:	Analysis Date: **5/31/2019**	SeqNo: **2040114** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	86.1	70	130	5.66	20	
Toluene	17	1.0	20.00	0	85.3	70	130	4.41	20	
Chlorobenzene	18	1.0	20.00	0	90.2	70	130	1.80	20	
1,1-Dichloroethene	17	1.0	20.00	0.3794	82.0	67.6	130	8.68	20	
Trichloroethene (TCE)	16	1.0	20.00	0	79.8	70	130	7.18	20	
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.6		10.00		86.1	70	130	0	0	
Surr: Dibromofluoromethane	9.5		10.00		95.3	70	130	0	0	
Surr: Toluene-d8	8.2		10.00		81.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45294**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **45294**	RunNo: **60505**							
Prep Date: **5/31/2019**	Analysis Date: **6/5/2019**	SeqNo: **2046811**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-45294**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **45294**	RunNo: **60505**							
Prep Date: **5/31/2019**	Analysis Date: **6/5/2019**	SeqNo: **2046812**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	167	2.0	198.0	0	84.3	84.6	115.4			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45316**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **45316**	RunNo: **60380**
Prep Date: **6/1/2019**	Analysis Date: **6/4/2019**	SeqNo: **2041962** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-45316**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **45316**	RunNo: **60380**
Prep Date: **6/1/2019**	Analysis Date: **6/4/2019**	SeqNo: **2041963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1905E66**
17-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45361**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **45361**	RunNo: **60418**							
Prep Date: **6/4/2019**	Analysis Date: **6/5/2019**	SeqNo: **2043272**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-45361**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **45361**	RunNo: **60418**							
Prep Date: **6/4/2019**	Analysis Date: **6/5/2019**	SeqNo: **2043273**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	110	4.0	95.10	0	119	81.07	115.67			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1905E66** RcptNo: **1**

Received By: **Desiree Dominguez** **5/30/2019 4:14:00 PM** DD

Completed By: **Erin Melendrez** **5/30/2019 5:24:10 PM**

Reviewed By: (BOD) 5/30/19 @ 1700 / ENM 5/31/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☑ No ~~☑~~ DAD 5/31/19 NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3
(<2 or >12 unless noted)
Adjusted? ~~NO~~ YES DAD 5/31/19
Checked by: DAD 5/31/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good	Yes			
2	1.8	Good	Yes			

Chain-of-Custody Record

Client:	MARATHON - WESTERN REFINING SW
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road, Gallup, NM 87301
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard X Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other ☐ EDD (Type)

Turn-Around Time:	X Standard ☐ Rush
Project Name:	2019 2ND QTR GW SAMPLES
Project #:	OW-10, NAPIS, LDU(2), STP1 TO EP-2
Project Manager:	Brian Moore
Sampler:	C. JOHNSON (CAJohnson1@marathonpetroleum.com)
On Ice:	X Yes ☐ No
Sample Temperature:	4.3+0.2(CF)=4.5°C; 1.6+0.2(CF)=1.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	Analysis Request: 8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS	8011 FOR EDB	8021B (BTEX)	BOD	COD	TDS	TSS			Air Bubbles (Y or N)
5/28/2019	700	aqueous	FIELD BLANK	3-40ML VOAS	HCL	1905E606	X														
5/28/2019	700	aqueous	TRIP BLANK	3-40ML VOAS	HCL		X														
5/28/2019	1440	aqueous	OW-10	Misc	Misc	-001	X	X	X	X	X	X	X								
5/28/2019	1450	aqueous	DUPLICATE	Misc	Misc	-002	X	X	X	X	X	X	X								
5/28/2019	1210	aqueous	NAPIS-3	Misc	Misc	-003	X	X	X	X	X	X	X								
5/28/2019	1155	aqueous	KA-3	Misc	Misc		X	X	X	X	2	X									
5/28/2019	1135	aqueous	NAPIS-2	Misc	Misc		X	X	X	X	X	X									
5/28/2019	1119	aqueous	WEST LDU	Misc	Misc			X	X	X				X							
5/28/2019	1109	aqueous	EAST LDU	Misc	Misc			X	X	X				X							
5/29/2019	1125	aqueous	STP1 TO EP-2	Misc	Misc	-004	X	X	X	X					X	X	X	X			

Date: 5/31/19	Time: 1400	Relinquished by:	Received by:	Date: 5/31/19	Time: 1405
Date: 05/30/19	Time: 1614	Relinquished by:	Received by: CDO	Date: 5/30/19	Time: 16:14

Remarks: Did not include sample bottles in 5/30/19 shipment. *COC is for highlighted analysis only* - ENM 5/30/19

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1590		50.0	5	06/08/2019 12:25	WG1290867

Method Blank (MB)

(MB) R3419145-1 06/08/19 12:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1098938-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1098938-01 06/08/19 12:22 • (DUP) R3419145-3 06/08/19 12:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	590	591	1	0.295		20

L1101302-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1101302-01 06/08/19 12:22 • (DUP) R3419145-4 06/08/19 12:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	1280	1280	5	0.219		20

L1104393-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1104393-02 06/08/19 12:25 • (DUP) R3419145-5 06/08/19 12:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	14.5	12.5	1	15.4		20

Laboratory Control Sample (LCS)

(LCS) R3419145-2 06/08/19 12:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	213	95.8	90.0-110	

L1104557-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1104557-01 06/08/19 12:26 • (MS) R3419145-6 06/08/19 12:27 • (MSD) R3419145-7 06/08/19 12:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	62.9	511	512	112	112	1	80.0-120			0.188	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 20, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2019 2ND QTR GW Samples OrderNo.: 1906248

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/5/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 7:30:00 AM
Lab ID: 1906248-001
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Toluene	ND	0.35	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Ethylbenzene	ND	0.13	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Naphthalene	ND	0.28	2.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Acetone	ND	1.2	10		µg/L	1	6/14/2019 11:07:15 AM	W6067
Bromobenzene	ND	0.24	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Bromodichloromethane	ND	0.13	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Bromoform	ND	0.29	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Bromomethane	ND	0.27	3.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
2-Butanone	ND	2.1	10		µg/L	1	6/14/2019 11:07:15 AM	W6067
Carbon disulfide	ND	0.45	10		µg/L	1	6/14/2019 11:07:15 AM	W6067
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Chlorobenzene	ND	0.19	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Chloroethane	ND	0.18	2.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Chloroform	ND	0.12	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Chloromethane	ND	0.32	3.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Dibromochloromethane	ND	0.24	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Dibromomethane	ND	0.21	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	6/14/2019 11:07:15 AM	W6067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 7:30:00 AM
Lab ID: 1906248-001 **Matrix:** AQUEOUS **Received Date:** 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
2-Hexanone	ND	1.5	10		µg/L	1	6/14/2019 11:07:15 AM	W6067
Isopropylbenzene	ND	0.19	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	6/14/2019 11:07:15 AM	W6067
Methylene Chloride	ND	0.15	3.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
n-Butylbenzene	ND	0.23	3.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
n-Propylbenzene	ND	0.21	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Styrene	ND	0.19	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Vinyl chloride	ND	0.18	1.0		µg/L	1	6/14/2019 11:07:15 AM	W6067
Xylenes, Total	ND	0.45	1.5		µg/L	1	6/14/2019 11:07:15 AM	W6067
Surr: 1,2-Dichloroethane-d4	93.8	0	70-130		%Rec	1	6/14/2019 11:07:15 AM	W6067
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	6/14/2019 11:07:15 AM	W6067
Surr: Dibromofluoromethane	77.4	0	70-130		%Rec	1	6/14/2019 11:07:15 AM	W6067
Surr: Toluene-d8	99.4	0	70-130		%Rec	1	6/14/2019 11:07:15 AM	W6067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 7:30:00 AM
Lab ID: 1906248-002
Matrix: TRIP BLANK
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Toluene	ND	0.35	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Ethylbenzene	ND	0.13	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Naphthalene	ND	0.28	2.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Acetone	ND	1.2	10		µg/L	1	6/14/2019 11:37:25 AM	W6067
Bromobenzene	ND	0.24	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Bromodichloromethane	ND	0.13	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Bromoform	ND	0.29	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Bromomethane	ND	0.27	3.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
2-Butanone	ND	2.1	10		µg/L	1	6/14/2019 11:37:25 AM	W6067
Carbon disulfide	ND	0.45	10		µg/L	1	6/14/2019 11:37:25 AM	W6067
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Chlorobenzene	ND	0.19	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Chloroethane	ND	0.18	2.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Chloroform	ND	0.12	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Chloromethane	ND	0.32	3.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Dibromochloromethane	ND	0.24	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Dibromomethane	ND	0.21	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	6/14/2019 11:37:25 AM	W6067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 7:30:00 AM
Lab ID: 1906248-002
Matrix: TRIP BLANK
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
2-Hexanone	ND	1.5	10		µg/L	1	6/14/2019 11:37:25 AM	W6067
Isopropylbenzene	ND	0.19	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	6/14/2019 11:37:25 AM	W6067
Methylene Chloride	ND	0.15	3.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
n-Butylbenzene	ND	0.23	3.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
n-Propylbenzene	ND	0.21	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Styrene	ND	0.19	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Vinyl chloride	ND	0.18	1.0		µg/L	1	6/14/2019 11:37:25 AM	W6067
Xylenes, Total	ND	0.45	1.5		µg/L	1	6/14/2019 11:37:25 AM	W6067
Surr: 1,2-Dichloroethane-d4	89.0	0	70-130		%Rec	1	6/14/2019 11:37:25 AM	W6067
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	6/14/2019 11:37:25 AM	W6067
Surr: Dibromofluoromethane	75.7	0	70-130		%Rec	1	6/14/2019 11:37:25 AM	W6067
Surr: Toluene-d8	91.8	0	70-130		%Rec	1	6/14/2019 11:37:25 AM	W6067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-003
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	6/11/2019 4:09:19 PM	45489
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.97	0.35	1.0	J	mg/L	1	6/11/2019 1:10:13 AM	45448
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	6/11/2019 1:10:13 AM	45448
Surr: DNOP	89.6	0	70-130		%Rec	1	6/11/2019 1:10:13 AM	45448
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.1	0.021	0.050		mg/L	1	6/6/2019 5:03:06 PM	G60459
Surr: BFB	93.6	0	72.8-125		%Rec	1	6/6/2019 5:03:06 PM	G60459
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	6/10/2019 10:31:15 AM	B60520
Barium	0.12	0.00065	0.0020		mg/L	1	6/10/2019 10:31:15 AM	B60520
Beryllium	ND	0.00028	0.0020		mg/L	1	6/10/2019 10:31:15 AM	B60520
Boron	0.52	0.0045	0.040		mg/L	1	6/10/2019 10:31:15 AM	B60520
Cadmium	ND	0.00055	0.0020		mg/L	1	6/10/2019 10:31:15 AM	B60520
Chromium	ND	0.0015	0.0060		mg/L	1	6/10/2019 10:31:15 AM	B60520
Cobalt	ND	0.0031	0.0060		mg/L	1	6/10/2019 10:31:15 AM	B60520
Copper	0.0056	0.0013	0.0060	J	mg/L	1	6/10/2019 10:31:15 AM	B60520
Iron	0.057	0.0087	0.020		mg/L	1	6/10/2019 10:31:15 AM	B60520
Manganese	0.067	0.00029	0.0020	*	mg/L	1	6/10/2019 10:31:15 AM	B60520
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/10/2019 10:31:15 AM	B60520
Nickel	0.042	0.0040	0.010		mg/L	1	6/10/2019 10:31:15 AM	B60520
Silver	ND	0.00094	0.0050		mg/L	1	6/10/2019 10:31:15 AM	B60520
Zinc	0.013	0.0023	0.010		mg/L	1	6/10/2019 10:31:15 AM	B60520
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.13	0.0025	0.020		mg/L	1	6/12/2019 4:51:08 PM	45501
Barium	0.13	0.00065	0.0020		mg/L	1	6/12/2019 4:51:08 PM	45501
Beryllium	ND	0.00028	0.0020		mg/L	1	6/12/2019 4:51:08 PM	45501
Boron	0.54	0.0045	0.040		mg/L	1	6/12/2019 4:51:08 PM	45501
Cadmium	ND	0.00074	0.0020		mg/L	1	6/12/2019 4:51:08 PM	45501
Chromium	ND	0.0015	0.0060		mg/L	1	6/12/2019 4:51:08 PM	45501
Cobalt	ND	0.0031	0.0060		mg/L	1	6/12/2019 4:51:08 PM	45501
Copper	0.0058	0.0041	0.0060	J	mg/L	1	6/12/2019 4:51:08 PM	45501
Iron	0.12	0.0087	0.020		mg/L	1	6/12/2019 4:51:08 PM	45501
Manganese	0.075	0.00029	0.0020	*	mg/L	1	6/12/2019 4:51:08 PM	45501
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/12/2019 4:51:08 PM	45501
Nickel	0.045	0.0040	0.010		mg/L	1	6/12/2019 4:51:08 PM	45501
Silver	ND	0.0014	0.0050		mg/L	1	6/12/2019 4:51:08 PM	45501

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-003
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	6/12/2019 4:51:08 PM	45501
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/6/2019 8:15:26 PM	D60465
Arsenic	0.00062	0.00010	0.0010	J	mg/L	1	6/6/2019 8:15:26 PM	D60465
Lead	0.00055	0.000055	0.00050		mg/L	1	6/6/2019 8:15:26 PM	D60465
Selenium	ND	0.00017	0.0010		mg/L	1	6/6/2019 8:15:26 PM	D60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 8:15:26 PM	D60465
Uranium	0.035	0.00037	0.0025	*	mg/L	5	6/10/2019 4:47:40 PM	B60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/12/2019 7:04:21 PM	45501
Arsenic	0.00083	0.00031	0.0010	J	mg/L	1	6/12/2019 7:04:21 PM	45501
Lead	0.00052	0.000055	0.00050		mg/L	1	6/12/2019 7:04:21 PM	45501
Selenium	ND	0.00048	0.0010		mg/L	1	6/12/2019 7:04:21 PM	45501
Thallium	ND	0.000052	0.00050		mg/L	1	6/12/2019 7:04:21 PM	45501
Uranium	0.035	0.00042	0.0025	*	mg/L	5	6/13/2019 12:46:30 PM	45501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.00019	0.0010		mg/L	5	6/19/2019 1:49:36 PM	45661
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.83	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Toluene	ND	1.8	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Ethylbenzene	ND	0.66	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Methyl tert-butyl ether (MTBE)	2300	23	50		µg/L	50	6/14/2019 12:07:38 PM	W6067
1,2,4-Trimethylbenzene	ND	1.1	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Naphthalene	ND	1.4	10		µg/L	5	6/14/2019 12:38:35 PM	W6067
1-Methylnaphthalene	ND	1.6	20		µg/L	5	6/14/2019 12:38:35 PM	W6067
2-Methylnaphthalene	ND	1.7	20		µg/L	5	6/14/2019 12:38:35 PM	W6067
Acetone	ND	6.0	50		µg/L	5	6/14/2019 12:38:35 PM	W6067
Bromobenzene	ND	1.2	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Bromodichloromethane	ND	0.67	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Bromoform	ND	1.4	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Bromomethane	ND	1.4	15		µg/L	5	6/14/2019 12:38:35 PM	W6067
2-Butanone	ND	10	50		µg/L	5	6/14/2019 12:38:35 PM	W6067
Carbon disulfide	ND	2.3	50		µg/L	5	6/14/2019 12:38:35 PM	W6067
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-003
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.97	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Chloroethane	ND	0.89	10		µg/L	5	6/14/2019 12:38:35 PM	W6067
Chloroform	ND	0.61	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Chloromethane	ND	1.6	15		µg/L	5	6/14/2019 12:38:35 PM	W6067
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	6/14/2019 12:38:35 PM	W6067
Dibromochloromethane	ND	1.2	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Dibromomethane	ND	1.0	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
2,2-Dichloropropane	ND	1.2	10		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
2-Hexanone	ND	7.7	50		µg/L	5	6/14/2019 12:38:35 PM	W6067
Isopropylbenzene	ND	0.96	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	6/14/2019 12:38:35 PM	W6067
Methylene Chloride	ND	0.77	15		µg/L	5	6/14/2019 12:38:35 PM	W6067
n-Butylbenzene	ND	1.1	15		µg/L	5	6/14/2019 12:38:35 PM	W6067
n-Propylbenzene	ND	1.1	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Styrene	ND	0.96	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	6/14/2019 12:38:35 PM	W6067
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-003
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	6/14/2019 12:38:35 PM	W6067
Vinyl chloride	ND	0.90	5.0		µg/L	5	6/14/2019 12:38:35 PM	W6067
Xylenes, Total	ND	2.3	7.5		µg/L	5	6/14/2019 12:38:35 PM	W6067
Surr: 1,2-Dichloroethane-d4	92.1	0	70-130		%Rec	5	6/14/2019 12:38:35 PM	W6067
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	5	6/14/2019 12:38:35 PM	W6067
Surr: Dibromofluoromethane	81.7	0	70-130		%Rec	5	6/14/2019 12:38:35 PM	W6067
Surr: Toluene-d8	97.1	0	70-130		%Rec	5	6/14/2019 12:38:35 PM	W6067

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-004 **Matrix:** AQUEOUS **Received Date:** 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	6/11/2019 4:24:24 PM	45489
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.92	0.35	1.0	J	mg/L	1	6/11/2019 2:24:12 AM	45448
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	6/11/2019 2:24:12 AM	45448
Surr: DNOP	96.9	0	70-130		%Rec	1	6/11/2019 2:24:12 AM	45448
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.0	0.021	0.050		mg/L	1	6/6/2019 5:26:51 PM	G60459
Surr: BFB	91.9	0	72.8-125		%Rec	1	6/6/2019 5:26:51 PM	G60459
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	6/10/2019 10:35:19 AM	B60520
Barium	0.12	0.00065	0.0020		mg/L	1	6/10/2019 10:35:19 AM	B60520
Beryllium	ND	0.00028	0.0020		mg/L	1	6/10/2019 10:35:19 AM	B60520
Boron	0.51	0.0045	0.040		mg/L	1	6/10/2019 10:35:19 AM	B60520
Cadmium	ND	0.00055	0.0020		mg/L	1	6/10/2019 10:35:19 AM	B60520
Chromium	ND	0.0015	0.0060		mg/L	1	6/10/2019 10:35:19 AM	B60520
Cobalt	ND	0.0031	0.0060		mg/L	1	6/10/2019 10:35:19 AM	B60520
Copper	0.0063	0.0013	0.0060		mg/L	1	6/10/2019 10:35:19 AM	B60520
Iron	0.060	0.0087	0.020		mg/L	1	6/10/2019 10:35:19 AM	B60520
Manganese	0.067	0.00029	0.0020	*	mg/L	1	6/10/2019 10:35:19 AM	B60520
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/10/2019 10:35:19 AM	B60520
Nickel	0.041	0.0040	0.010		mg/L	1	6/10/2019 10:35:19 AM	B60520
Silver	0.0010	0.00094	0.0050	J	mg/L	1	6/10/2019 10:35:19 AM	B60520
Zinc	0.19	0.0023	0.010		mg/L	1	6/10/2019 10:35:19 AM	B60520
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.14	0.0025	0.020		mg/L	1	6/12/2019 4:55:21 PM	45501
Barium	0.13	0.00065	0.0020		mg/L	1	6/12/2019 4:55:21 PM	45501
Beryllium	ND	0.00028	0.0020		mg/L	1	6/12/2019 4:55:21 PM	45501
Boron	0.52	0.0045	0.040		mg/L	1	6/12/2019 4:55:21 PM	45501
Cadmium	ND	0.00074	0.0020		mg/L	1	6/12/2019 4:55:21 PM	45501
Chromium	ND	0.0015	0.0060		mg/L	1	6/12/2019 4:55:21 PM	45501
Cobalt	ND	0.0031	0.0060		mg/L	1	6/12/2019 4:55:21 PM	45501
Copper	0.0060	0.0041	0.0060	J	mg/L	1	6/12/2019 4:55:21 PM	45501
Iron	0.12	0.0087	0.020		mg/L	1	6/12/2019 4:55:21 PM	45501
Manganese	0.073	0.00029	0.0020	*	mg/L	1	6/12/2019 4:55:21 PM	45501
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/12/2019 4:55:21 PM	45501
Nickel	0.043	0.0040	0.010		mg/L	1	6/12/2019 4:55:21 PM	45501
Silver	ND	0.0014	0.0050		mg/L	1	6/12/2019 4:55:21 PM	45501

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-004
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	6/12/2019 4:55:21 PM	45501
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/6/2019 8:18:08 PM	D60465
Arsenic	0.00075	0.00010	0.0010	J	mg/L	1	6/6/2019 8:18:08 PM	D60465
Lead	0.00056	0.000055	0.00050		mg/L	1	6/6/2019 8:18:08 PM	D60465
Selenium	ND	0.00017	0.0010		mg/L	1	6/6/2019 8:18:08 PM	D60465
Thallium	ND	0.000048	0.00050		mg/L	1	6/6/2019 8:18:08 PM	D60465
Uranium	0.035	0.00037	0.0025	*	mg/L	5	6/10/2019 4:50:22 PM	B60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/13/2019 9:53:56 AM	45501
Arsenic	0.00080	0.00031	0.0010	J	mg/L	1	6/13/2019 9:53:56 AM	45501
Lead	0.00051	0.000055	0.00050		mg/L	1	6/13/2019 9:53:56 AM	45501
Selenium	ND	0.00048	0.0010		mg/L	1	6/13/2019 9:53:56 AM	45501
Thallium	ND	0.000052	0.00050		mg/L	1	6/13/2019 9:53:56 AM	45501
Uranium	0.033	0.00042	0.0025	*	mg/L	5	6/13/2019 5:54:09 PM	45501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/19/2019 12:06:55 PM	45661
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.83	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Toluene	ND	1.8	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Ethylbenzene	ND	0.66	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Methyl tert-butyl ether (MTBE)	2300	23	50		µg/L	50	6/14/2019 1:09:47 PM	W6067
1,2,4-Trimethylbenzene	ND	1.1	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Naphthalene	ND	1.4	10		µg/L	5	6/14/2019 1:41:23 PM	W6067
1-Methylnaphthalene	ND	1.6	20		µg/L	5	6/14/2019 1:41:23 PM	W6067
2-Methylnaphthalene	ND	1.7	20		µg/L	5	6/14/2019 1:41:23 PM	W6067
Acetone	ND	6.0	50		µg/L	5	6/14/2019 1:41:23 PM	W6067
Bromobenzene	ND	1.2	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Bromodichloromethane	ND	0.67	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Bromoform	ND	1.4	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Bromomethane	ND	1.4	15		µg/L	5	6/14/2019 1:41:23 PM	W6067
2-Butanone	ND	10	50		µg/L	5	6/14/2019 1:41:23 PM	W6067
Carbon disulfide	ND	2.3	50		µg/L	5	6/14/2019 1:41:23 PM	W6067
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
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Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-004
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chlorobenzene	ND	0.97	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Chloroethane	ND	0.89	10		µg/L	5	6/14/2019 1:41:23 PM	W6067
Chloroform	ND	0.61	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Chloromethane	ND	1.6	15		µg/L	5	6/14/2019 1:41:23 PM	W6067
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	6/14/2019 1:41:23 PM	W6067
Dibromochloromethane	ND	1.2	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Dibromomethane	ND	1.0	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
2,2-Dichloropropane	ND	1.2	10		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
2-Hexanone	ND	7.7	50		µg/L	5	6/14/2019 1:41:23 PM	W6067
Isopropylbenzene	ND	0.96	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	6/14/2019 1:41:23 PM	W6067
Methylene Chloride	ND	0.77	15		µg/L	5	6/14/2019 1:41:23 PM	W6067
n-Butylbenzene	ND	1.1	15		µg/L	5	6/14/2019 1:41:23 PM	W6067
n-Propylbenzene	ND	1.1	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
sec-Butylbenzene	1.5	1.2	5.0	J	µg/L	5	6/14/2019 1:41:23 PM	W6067
Styrene	ND	0.96	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	6/14/2019 1:41:23 PM	W6067
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 8:22:00 AM
Lab ID: 1906248-004
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	6/14/2019 1:41:23 PM	W6067
Vinyl chloride	ND	0.90	5.0		µg/L	5	6/14/2019 1:41:23 PM	W6067
Xylenes, Total	ND	2.3	7.5		µg/L	5	6/14/2019 1:41:23 PM	W6067
Surr: 1,2-Dichloroethane-d4	96.1	0	70-130		%Rec	5	6/14/2019 1:41:23 PM	W6067
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	5	6/14/2019 1:41:23 PM	W6067
Surr: Dibromofluoromethane	85.8	0	70-130		%Rec	5	6/14/2019 1:41:23 PM	W6067
Surr: Toluene-d8	95.5	0	70-130		%Rec	5	6/14/2019 1:41:23 PM	W6067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 9:24:00 AM
Lab ID: 1906248-005 **Matrix:** AQUEOUS **Received Date:** 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	7.7	0.35	1.0		mg/L	1	6/11/2019 2:48:53 AM	45448
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	6/11/2019 2:48:53 AM	45448
Surr: DNOP	114	0	70-130		%Rec	1	6/11/2019 2:48:53 AM	45448
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	68	2.1	5.0		mg/L	100	6/6/2019 5:50:38 PM	G60459
Surr: BFB	99.5	0	72.8-125		%Rec	100	6/6/2019 5:50:38 PM	G60459
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.25	0.50		mg/L	5	6/6/2019 3:01:21 PM	R60475
Chloride	190	1.2	10		mg/L	20	6/6/2019 3:14:13 PM	R60475
Nitrogen, Nitrite (As N)	ND	0.022	0.50		mg/L	5	6/6/2019 3:01:21 PM	R60475
Bromide	2.0	0.089	0.50		mg/L	5	6/6/2019 3:01:21 PM	R60475
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	6/6/2019 3:01:21 PM	R60475
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	6/6/2019 3:01:21 PM	R60475
Sulfate	ND	0.27	2.5		mg/L	5	6/6/2019 3:01:21 PM	R60475
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	6/10/2019 10:51:38 AM	B60520
Barium	4.2	0.0032	0.010	*	mg/L	5	6/10/2019 10:53:37 AM	B60520
Beryllium	ND	0.00028	0.0020		mg/L	1	6/10/2019 10:51:38 AM	B60520
Boron	0.33	0.0045	0.040		mg/L	1	6/10/2019 10:51:38 AM	B60520
Cadmium	ND	0.00055	0.0020		mg/L	1	6/10/2019 10:51:38 AM	B60520
Calcium	130	0.31	5.0		mg/L	5	6/10/2019 10:53:37 AM	B60520
Chromium	ND	0.0015	0.0060		mg/L	1	6/10/2019 10:51:38 AM	B60520
Cobalt	ND	0.0031	0.0060		mg/L	1	6/10/2019 10:51:38 AM	B60520
Copper	ND	0.0013	0.0060		mg/L	1	6/10/2019 10:51:38 AM	B60520
Iron	7.9	0.087	0.20	*	mg/L	10	6/10/2019 12:52:50 PM	B60520
Magnesium	36	0.050	1.0		mg/L	1	6/10/2019 10:51:38 AM	B60520
Manganese	2.0	0.0014	0.010	*	mg/L	5	6/10/2019 10:53:37 AM	B60520
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/10/2019 10:51:38 AM	B60520
Nickel	0.021	0.0040	0.010		mg/L	1	6/10/2019 10:51:38 AM	B60520
Potassium	0.33	0.16	1.0	J	mg/L	1	6/10/2019 10:51:38 AM	B60520
Silver	0.0011	0.00094	0.0050	J	mg/L	1	6/10/2019 10:51:38 AM	B60520
Sodium	250	2.1	5.0		mg/L	5	6/10/2019 10:53:37 AM	B60520
Zinc	0.0029	0.0023	0.010	J	mg/L	1	6/10/2019 10:51:38 AM	B60520
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.4	0.012	0.10	*	mg/L	5	6/12/2019 5:08:41 PM	45501
Barium	4.3	0.0032	0.010	*	mg/L	5	6/12/2019 5:08:41 PM	45501
Beryllium	0.00059	0.00028	0.0020	J	mg/L	1	6/12/2019 4:59:33 PM	45501

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 9:24:00 AM
Lab ID: 1906248-005
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.33	0.0045	0.040		mg/L	1	6/12/2019 4:59:33 PM	45501
Cadmium	ND	0.00074	0.0020		mg/L	1	6/12/2019 4:59:33 PM	45501
Chromium	ND	0.0015	0.0060		mg/L	1	6/12/2019 4:59:33 PM	45501
Cobalt	ND	0.0031	0.0060		mg/L	1	6/12/2019 4:59:33 PM	45501
Copper	ND	0.0041	0.0060		mg/L	1	6/12/2019 4:59:33 PM	45501
Iron	9.8	0.17	0.40	*	mg/L	20	6/12/2019 5:10:48 PM	45501
Manganese	2.1	0.0014	0.010	*	mg/L	5	6/12/2019 5:08:41 PM	45501
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/12/2019 4:59:33 PM	45501
Nickel	0.025	0.0040	0.010		mg/L	1	6/12/2019 4:59:33 PM	45501
Silver	0.0015	0.0014	0.0050	J	mg/L	1	6/12/2019 4:59:33 PM	45501
Zinc	0.0062	0.0058	0.010	J	mg/L	1	6/12/2019 4:59:33 PM	45501
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/10/2019 4:53:04 PM	B60533
Arsenic	0.0024	0.00010	0.0010		mg/L	1	6/10/2019 4:53:04 PM	B60533
Lead	ND	0.000055	0.00050		mg/L	1	6/10/2019 4:53:04 PM	B60533
Selenium	0.00027	0.00017	0.0010	J	mg/L	1	6/10/2019 4:53:04 PM	B60533
Thallium	ND	0.000048	0.00050		mg/L	1	6/10/2019 4:53:04 PM	B60533
Uranium	0.00015	0.000075	0.00050	J	mg/L	1	6/10/2019 4:53:04 PM	B60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	6/17/2019 7:31:51 PM	45501
Arsenic	0.0028	0.00031	0.0010		mg/L	1	6/17/2019 7:31:51 PM	45501
Lead	0.0015	0.000055	0.00050		mg/L	1	6/17/2019 7:31:51 PM	45501
Selenium	ND	0.00048	0.0010		mg/L	1	6/17/2019 7:31:51 PM	45501
Thallium	ND	0.000052	0.00050		mg/L	1	6/17/2019 7:31:51 PM	45501
Uranium	0.00030	0.000085	0.00050	J	mg/L	1	6/17/2019 7:31:51 PM	45501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/19/2019 12:09:10 PM	45661
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Acenaphthylene	ND	2.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Aniline	ND	3.6	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Anthracene	ND	2.7	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Azobenzene	ND	3.3	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Benz(a)anthracene	ND	3.6	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Benzo(a)pyrene	ND	3.5	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	6/12/2019 9:47:30 PM	45493

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 9:24:00 AM
Lab ID: 1906248-005
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Benzoic acid	25	11	20		µg/L	1	6/12/2019 9:47:30 PM	45493
Benzyl alcohol	ND	2.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Bis(2-ethylhexyl)phthalate	5.6	4.3	10	J	µg/L	1	6/12/2019 9:47:30 PM	45493
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Carbazole	ND	2.9	10		µg/L	1	6/12/2019 9:47:30 PM	45493
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
4-Chloroaniline	ND	2.3	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2-Chloronaphthalene	ND	3.1	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2-Chlorophenol	ND	2.7	10		µg/L	1	6/12/2019 9:47:30 PM	45493
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Chrysene	ND	2.8	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Di-n-octyl phthalate	5.2	3.5	10	J	µg/L	1	6/12/2019 9:47:30 PM	45493
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Dibenzofuran	ND	3.2	10		µg/L	1	6/12/2019 9:47:30 PM	45493
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/12/2019 9:47:30 PM	45493
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	6/12/2019 9:47:30 PM	45493
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Diethyl phthalate	ND	2.9	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Dimethyl phthalate	ND	3.2	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	6/12/2019 9:47:30 PM	45493
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	6/12/2019 9:47:30 PM	45493
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	6/12/2019 9:47:30 PM	45493
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Fluoranthene	ND	2.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Fluorene	4.9	2.9	10	J	µg/L	1	6/12/2019 9:47:30 PM	45493
Hexachlorobenzene	ND	3.1	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Hexachlorobutadiene	ND	4.7	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Hexachloroethane	ND	4.8	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	6/12/2019 9:47:30 PM	45493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 9:24:00 AM
Lab ID: 1906248-005
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
1-Methylnaphthalene	85	3.1	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2-Methylnaphthalene	61	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2-Methylphenol	ND	2.9	10		µg/L	1	6/12/2019 9:47:30 PM	45493
3+4-Methylphenol	6.8	3.6	10	J	µg/L	1	6/12/2019 9:47:30 PM	45493
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	6/12/2019 9:47:30 PM	45493
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Naphthalene	140	4.1	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2-Nitroaniline	ND	3.2	10		µg/L	1	6/12/2019 9:47:30 PM	45493
3-Nitroaniline	ND	3.2	10		µg/L	1	6/12/2019 9:47:30 PM	45493
4-Nitroaniline	ND	2.7	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Nitrobenzene	ND	2.8	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2-Nitrophenol	ND	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
4-Nitrophenol	ND	7.6	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Pentachlorophenol	ND	2.7	20		µg/L	1	6/12/2019 9:47:30 PM	45493
Phenanthrene	ND	2.8	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Phenol	62	8.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Pyrene	ND	2.5	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Pyridine	ND	9.6	10		µg/L	1	6/12/2019 9:47:30 PM	45493
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	6/12/2019 9:47:30 PM	45493
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	6/12/2019 9:47:30 PM	45493
Surr: 2-Fluorophenol	54.4	0	15-101		%Rec	1	6/12/2019 9:47:30 PM	45493
Surr: Phenol-d5	44.3	0	15-84.6		%Rec	1	6/12/2019 9:47:30 PM	45493
Surr: 2,4,6-Tribromophenol	69.6	0	27.8-112		%Rec	1	6/12/2019 9:47:30 PM	45493
Surr: Nitrobenzene-d5	79.5	0	33-113		%Rec	1	6/12/2019 9:47:30 PM	45493
Surr: 2-Fluorobiphenyl	77.0	0	26.6-107		%Rec	1	6/12/2019 9:47:30 PM	45493
Surr: 4-Terphenyl-d14	69.3	0	18.7-148		%Rec	1	6/12/2019 9:47:30 PM	45493
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	34000	170	1000		µg/L	1E+	6/14/2019 2:13:30 PM	W6067
Toluene	62	35	100	J	µg/L	100	6/14/2019 2:45:58 PM	W6067
Ethylbenzene	1200	13	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Methyl tert-butyl ether (MTBE)	2300	46	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2,4-Trimethylbenzene	ND	21	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,3,5-Trimethylbenzene	ND	19	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2-Dibromoethane (EDB)	ND	17	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Naphthalene	200	28	200	J	µg/L	100	6/14/2019 2:45:58 PM	W6067

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 9:24:00 AM
Lab ID: 1906248-005
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1-Methylnaphthalene	110	31	400	J	µg/L	100	6/14/2019 2:45:58 PM	W6067
2-Methylnaphthalene	79	35	400	J	µg/L	100	6/14/2019 2:45:58 PM	W6067
Acetone	ND	120	1000		µg/L	100	6/14/2019 2:45:58 PM	W6067
Bromobenzene	ND	24	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Bromodichloromethane	ND	13	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Bromoform	ND	29	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Bromomethane	ND	27	300		µg/L	100	6/14/2019 2:45:58 PM	W6067
2-Butanone	ND	210	1000		µg/L	100	6/14/2019 2:45:58 PM	W6067
Carbon disulfide	ND	45	1000		µg/L	100	6/14/2019 2:45:58 PM	W6067
Carbon Tetrachloride	ND	14	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Chlorobenzene	ND	19	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Chloroethane	ND	18	200		µg/L	100	6/14/2019 2:45:58 PM	W6067
Chloroform	ND	12	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Chloromethane	ND	32	300		µg/L	100	6/14/2019 2:45:58 PM	W6067
2-Chlorotoluene	ND	25	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
4-Chlorotoluene	ND	23	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
cis-1,2-DCE	ND	19	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
cis-1,3-Dichloropropene	ND	14	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2-Dibromo-3-chloropropane	ND	33	200		µg/L	100	6/14/2019 2:45:58 PM	W6067
Dibromochloromethane	ND	24	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Dibromomethane	ND	21	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2-Dichlorobenzene	ND	30	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,3-Dichlorobenzene	ND	25	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,4-Dichlorobenzene	ND	29	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Dichlorodifluoromethane	ND	26	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,1-Dichloroethane	ND	14	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,1-Dichloroethene	ND	21	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2-Dichloropropane	ND	21	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,3-Dichloropropane	ND	20	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
2,2-Dichloropropane	ND	23	200		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,1-Dichloropropene	ND	16	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Hexachlorobutadiene	ND	31	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
2-Hexanone	ND	150	1000		µg/L	100	6/14/2019 2:45:58 PM	W6067
Isopropylbenzene	28	19	100	J	µg/L	100	6/14/2019 2:45:58 PM	W6067
4-Isopropyltoluene	ND	22	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	6/14/2019 2:45:58 PM	W6067
Methylene Chloride	ND	15	300		µg/L	100	6/14/2019 2:45:58 PM	W6067
n-Butylbenzene	ND	23	300		µg/L	100	6/14/2019 2:45:58 PM	W6067
n-Propylbenzene	86	21	100	J	µg/L	100	6/14/2019 2:45:58 PM	W6067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-58
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 9:24:00 AM
Lab ID: 1906248-005 **Matrix:** AQUEOUS **Received Date:** 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
sec-Butylbenzene	ND	25	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Styrene	ND	19	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
tert-Butylbenzene	ND	21	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,1,1,2-Tetrachloroethane	ND	21	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,1,2,2-Tetrachloroethane	ND	55	200		µg/L	100	6/14/2019 2:45:58 PM	W6067
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
trans-1,2-DCE	ND	18	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
trans-1,3-Dichloropropene	ND	17	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2,3-Trichlorobenzene	ND	30	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2,4-Trichlorobenzene	ND	20	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,1,1-Trichloroethane	ND	17	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,1,2-Trichloroethane	ND	22	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Trichloroethene (TCE)	ND	17	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Trichlorofluoromethane	ND	19	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
1,2,3-Trichloropropane	ND	30	200		µg/L	100	6/14/2019 2:45:58 PM	W6067
Vinyl chloride	ND	18	100		µg/L	100	6/14/2019 2:45:58 PM	W6067
Xylenes, Total	130	45	150	J	µg/L	100	6/14/2019 2:45:58 PM	W6067
Surr: 1,2-Dichloroethane-d4	93.5	0	70-130		%Rec	100	6/14/2019 2:45:58 PM	W6067
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	100	6/14/2019 2:45:58 PM	W6067
Surr: Dibromofluoromethane	79.6	0	70-130		%Rec	100	6/14/2019 2:45:58 PM	W6067
Surr: Toluene-d8	96.6	0	70-130		%Rec	100	6/14/2019 2:45:58 PM	W6067

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 12:55:00 PM
Lab ID: 1906248-006 **Matrix:** AQUEOUS **Received Date:** 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	46	0.35	1.0		mg/L	1	6/11/2019 3:13:38 AM	45448
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	6/11/2019 3:13:38 AM	45448
Surr: DNOP	118	0	70-130		%Rec	1	6/11/2019 3:13:38 AM	45448
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.34	0.021	0.050		mg/L	1	6/6/2019 6:14:16 PM	G60459
Surr: BFB	343	0	72.8-125	S	%Rec	1	6/6/2019 6:14:16 PM	G60459
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.25	0.50		mg/L	5	6/6/2019 3:27:05 PM	R60475
Chloride	9000	500	500		mg/L	1E+	6/18/2019 5:39:36 PM	R60755
Nitrogen, Nitrite (As N)	ND	0.090	2.0		mg/L	20	6/6/2019 3:39:58 PM	R60475
Bromide	0.46	0.089	0.50	J	mg/L	5	6/6/2019 3:27:05 PM	R60475
Nitrogen, Nitrate (As N)	ND	0.027	0.50		mg/L	5	6/6/2019 3:27:05 PM	R60475
Phosphorus, Orthophosphate (As P)	ND	0.20	2.5		mg/L	5	6/6/2019 3:27:05 PM	R60475
Sulfate	140	0.27	2.5		mg/L	5	6/6/2019 3:27:05 PM	R60475
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.061	0.0025	0.020		mg/L	1	6/10/2019 10:55:46 AM	B60520
Barium	1.6	0.0032	0.010		mg/L	5	6/10/2019 10:57:43 AM	B60520
Beryllium	0.00029	0.00028	0.0020	J	mg/L	1	6/10/2019 10:55:46 AM	B60520
Boron	0.48	0.0045	0.040		mg/L	1	6/10/2019 10:55:46 AM	B60520
Cadmium	ND	0.00055	0.0020		mg/L	1	6/10/2019 10:55:46 AM	B60520
Calcium	1000	1.2	20		mg/L	20	6/10/2019 12:54:58 PM	B60520
Chromium	ND	0.0015	0.0060		mg/L	1	6/10/2019 10:55:46 AM	B60520
Cobalt	ND	0.0031	0.0060		mg/L	1	6/10/2019 10:55:46 AM	B60520
Copper	0.0026	0.0013	0.0060	J	mg/L	1	6/10/2019 10:55:46 AM	B60520
Iron	27	0.44	1.0	*	mg/L	50	6/10/2019 12:57:07 PM	B60520
Magnesium	300	0.25	5.0		mg/L	5	6/10/2019 10:57:43 AM	B60520
Manganese	10	0.0058	0.040	*	mg/L	20	6/10/2019 12:54:58 PM	B60520
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/10/2019 10:55:46 AM	B60520
Nickel	0.0045	0.0040	0.010	J	mg/L	1	6/10/2019 10:55:46 AM	B60520
Potassium	13	0.16	1.0		mg/L	1	6/10/2019 10:55:46 AM	B60520
Silver	0.010	0.00094	0.0050		mg/L	1	6/10/2019 10:55:46 AM	B60520
Sodium	4300	21	50		mg/L	50	6/10/2019 12:57:07 PM	B60520
Zinc	0.0067	0.0023	0.010	J	mg/L	1	6/10/2019 10:55:46 AM	B60520
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	4.9	0.050	0.40	*	mg/L	20	6/12/2019 5:17:28 PM	45501
Barium	11	0.013	0.040	*	mg/L	20	6/12/2019 5:17:28 PM	45501
Beryllium	0.0011	0.00028	0.0020	J	mg/L	1	6/12/2019 5:13:07 PM	45501

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 12:55:00 PM
Lab ID: 1906248-006
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.46	0.0045	0.040		mg/L	1	6/12/2019 5:13:07 PM	45501
Cadmium	ND	0.00074	0.0020		mg/L	1	6/12/2019 5:13:07 PM	45501
Chromium	ND	0.0015	0.0060		mg/L	1	6/12/2019 5:13:07 PM	45501
Cobalt	ND	0.0031	0.0060		mg/L	1	6/12/2019 5:13:07 PM	45501
Copper	ND	0.0041	0.0060		mg/L	1	6/12/2019 5:13:07 PM	45501
Iron	27	0.44	1.0	*	mg/L	50	6/13/2019 12:50:20 PM	45501
Manganese	10	0.0058	0.040	*	mg/L	20	6/12/2019 5:17:28 PM	45501
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/12/2019 5:13:07 PM	45501
Nickel	0.0070	0.0040	0.010	J	mg/L	1	6/12/2019 5:13:07 PM	45501
Silver	0.0097	0.0014	0.0050		mg/L	1	6/12/2019 5:13:07 PM	45501
Zinc	0.0079	0.0058	0.010	J	mg/L	1	6/12/2019 5:13:07 PM	45501
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	6/10/2019 4:55:46 PM	B60533
Arsenic	ND	0.00050	0.0050		mg/L	5	6/10/2019 4:55:46 PM	B60533
Lead	ND	0.00027	0.0025		mg/L	5	6/10/2019 4:55:46 PM	B60533
Selenium	0.0012	0.00086	0.0050	J	mg/L	5	6/10/2019 4:55:46 PM	B60533
Thallium	ND	0.00024	0.0025		mg/L	5	6/10/2019 4:55:46 PM	B60533
Uranium	0.00048	0.00037	0.0025	J	mg/L	5	6/10/2019 4:55:46 PM	B60533
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	6/13/2019 9:58:18 AM	45501
Arsenic	ND	0.0016	0.0050		mg/L	5	6/13/2019 9:58:18 AM	45501
Lead	0.0037	0.00027	0.0025		mg/L	5	6/13/2019 9:58:18 AM	45501
Selenium	ND	0.0024	0.0050		mg/L	5	6/13/2019 9:58:18 AM	45501
Thallium	ND	0.00026	0.0025		mg/L	5	6/13/2019 9:58:18 AM	45501
Uranium	0.00084	0.00042	0.0025	J	mg/L	5	6/13/2019 9:58:18 AM	45501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	6/19/2019 12:11:25 PM	45661
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Acenaphthylene	ND	2.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Aniline	ND	3.6	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Anthracene	ND	2.7	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Azobenzene	ND	3.3	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Benz(a)anthracene	ND	3.6	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Benzo(a)pyrene	ND	3.5	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	6/12/2019 11:18:00 PM	45493

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 12:55:00 PM
Lab ID: 1906248-006 **Matrix:** AQUEOUS **Received Date:** 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Benzoic acid	ND	11	20		µg/L	1	6/12/2019 11:18:00 PM	45493
Benzyl alcohol	ND	2.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Bis(2-ethylhexyl)phthalate	9.9	4.3	10	J	µg/L	1	6/12/2019 11:18:00 PM	45493
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Carbazole	ND	2.9	10		µg/L	1	6/12/2019 11:18:00 PM	45493
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
4-Chloroaniline	ND	2.3	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2-Chloronaphthalene	ND	3.1	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2-Chlorophenol	ND	2.7	10		µg/L	1	6/12/2019 11:18:00 PM	45493
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Chrysene	4.6	2.8	10	J	µg/L	1	6/12/2019 11:18:00 PM	45493
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Di-n-octyl phthalate	4.5	3.5	10	J	µg/L	1	6/12/2019 11:18:00 PM	45493
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Dibenzofuran	ND	3.2	10		µg/L	1	6/12/2019 11:18:00 PM	45493
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	6/12/2019 11:18:00 PM	45493
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	6/12/2019 11:18:00 PM	45493
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Diethyl phthalate	ND	2.9	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Dimethyl phthalate	ND	3.2	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	6/12/2019 11:18:00 PM	45493
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	6/12/2019 11:18:00 PM	45493
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	6/12/2019 11:18:00 PM	45493
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Fluoranthene	ND	2.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Fluorene	47	2.9	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Hexachlorobenzene	ND	3.1	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Hexachlorobutadiene	ND	4.7	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Hexachloroethane	ND	4.8	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	6/12/2019 11:18:00 PM	45493

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 12:55:00 PM
Lab ID: 1906248-006
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
1-Methylnaphthalene	340	15	50		µg/L	5	6/13/2019 6:19:54 PM	45493
2-Methylnaphthalene	230	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2-Methylphenol	ND	2.9	10		µg/L	1	6/12/2019 11:18:00 PM	45493
3+4-Methylphenol	ND	3.6	10		µg/L	1	6/12/2019 11:18:00 PM	45493
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	6/12/2019 11:18:00 PM	45493
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Naphthalene	57	4.1	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2-Nitroaniline	ND	3.2	10		µg/L	1	6/12/2019 11:18:00 PM	45493
3-Nitroaniline	ND	3.2	10		µg/L	1	6/12/2019 11:18:00 PM	45493
4-Nitroaniline	ND	2.7	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Nitrobenzene	ND	2.8	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2-Nitrophenol	ND	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
4-Nitrophenol	ND	7.6	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Pentachlorophenol	ND	2.7	20		µg/L	1	6/12/2019 11:18:00 PM	45493
Phenanthrene	86	2.8	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Phenol	ND	8.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Pyrene	15	2.5	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Pyridine	ND	9.6	10		µg/L	1	6/12/2019 11:18:00 PM	45493
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	6/12/2019 11:18:00 PM	45493
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	6/12/2019 11:18:00 PM	45493
Surr: 2-Fluorophenol	47.7	0	15-101		%Rec	1	6/12/2019 11:18:00 PM	45493
Surr: Phenol-d5	40.6	0	15-84.6		%Rec	1	6/12/2019 11:18:00 PM	45493
Surr: 2,4,6-Tribromophenol	66.0	0	27.8-112		%Rec	1	6/12/2019 11:18:00 PM	45493
Surr: Nitrobenzene-d5	116	0	33-113	S	%Rec	1	6/12/2019 11:18:00 PM	45493
Surr: 2-Fluorobiphenyl	66.6	0	26.6-107		%Rec	1	6/12/2019 11:18:00 PM	45493
Surr: 4-Terphenyl-d14	74.2	0	18.7-148		%Rec	1	6/12/2019 11:18:00 PM	45493
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	9.1	0.17	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Toluene	0.80	0.35	1.0	J	µg/L	1	6/14/2019 3:47:12 PM	W6067
Ethylbenzene	34	0.13	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2,4-Trimethylbenzene	21	0.21	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,3,5-Trimethylbenzene	4.3	0.19	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Naphthalene	33	0.28	2.0		µg/L	1	6/14/2019 3:47:12 PM	W6067

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 12:55:00 PM
Lab ID: 1906248-006
Matrix: AQUEOUS
Received Date: 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1-Methylnaphthalene	150	3.1	40		µg/L	10	6/14/2019 3:16:46 PM	W6067
2-Methylnaphthalene	85	0.35	4.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Acetone	ND	1.2	10		µg/L	1	6/14/2019 3:47:12 PM	W6067
Bromobenzene	ND	0.24	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Bromodichloromethane	ND	0.13	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Bromoform	ND	0.29	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Bromomethane	ND	0.27	3.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
2-Butanone	ND	2.1	10		µg/L	1	6/14/2019 3:47:12 PM	W6067
Carbon disulfide	ND	0.45	10		µg/L	1	6/14/2019 3:47:12 PM	W6067
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Chlorobenzene	ND	0.19	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Chloroethane	ND	0.18	2.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Chloroform	ND	0.12	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Chloromethane	ND	0.32	3.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Dibromochloromethane	ND	0.24	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Dibromomethane	ND	0.21	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,1-Dichloroethane	0.41	0.14	1.0	J	µg/L	1	6/14/2019 3:47:12 PM	W6067
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
2-Hexanone	ND	1.5	10		µg/L	1	6/14/2019 3:47:12 PM	W6067
Isopropylbenzene	15	0.19	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
4-Isopropyltoluene	2.0	0.22	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	6/14/2019 3:47:12 PM	W6067
Methylene Chloride	ND	0.15	3.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
n-Butylbenzene	6.2	0.23	3.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
n-Propylbenzene	19	0.21	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2019 2ND QTR GW Samples
Collection Date: 6/5/2019 12:55:00 PM
Lab ID: 1906248-006 **Matrix:** AQUEOUS **Received Date:** 6/5/2019 4:05:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
sec-Butylbenzene	8.2	0.25	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Styrene	ND	0.19	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
tert-Butylbenzene	0.21	0.21	1.0	J	µg/L	1	6/14/2019 3:47:12 PM	W6067
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	6/14/2019 3:47:12 PM	W6067
Vinyl chloride	0.44	0.18	1.0	J	µg/L	1	6/14/2019 3:47:12 PM	W6067
Xylenes, Total	16	0.45	1.5		µg/L	1	6/14/2019 3:47:12 PM	W6067
Surr: 1,2-Dichloroethane-d4	88.4	0	70-130		%Rec	1	6/14/2019 3:47:12 PM	W6067
Surr: 4-Bromofluorobenzene	143	0	70-130	S	%Rec	1	6/14/2019 3:47:12 PM	W6067
Surr: Dibromofluoromethane	76.3	0	70-130		%Rec	1	6/14/2019 3:47:12 PM	W6067
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	6/14/2019 3:47:12 PM	W6067

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047467** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047469** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	104	85	115			
Barium	0.47	0.0020	0.5000	0	93.2	85	115			
Beryllium	0.47	0.0020	0.5000	0	93.7	85	115			
Boron	0.47	0.040	0.5000	0	94.4	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.7	85	115			
Calcium	49	1.0	50.00	0	98.3	85	115			
Chromium	0.47	0.0060	0.5000	0	94.5	85	115			
Cobalt	0.46	0.0060	0.5000	0	92.1	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.47	0.020	0.5000	0	94.1	85	115			
Magnesium	49	1.0	50.00	0	98.6	85	115			
Manganese	0.47	0.0020	0.5000	0	93.7	85	115			
Molybdenum	0.47	0.0080	0.5000	0	94.5	85	115			
Nickel	0.47	0.010	0.5000	0	93.8	85	115			
Potassium	49	1.0	50.00	0	97.0	85	115			

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047469** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.2	85	115			
Sodium	49	1.0	50.00	0	97.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.0	85	115			

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	121	50	150			J
Barium	0.0020	0.0020	0.002000	0	98.9	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	96.2	50	150			J
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0020	0.0020	0.002000	0	98.3	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0072	0.0060	0.006000	0	120	50	150			
Cobalt	0.0055	0.0060	0.006000	0	92.0	50	150			J
Copper	0.0070	0.0060	0.006000	0	116	50	150			
Iron	0.019	0.020	0.02000	0	94.6	50	150			J
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0053	0.010	0.005000	0	107	50	150			J
Potassium	0.49	1.0	0.5000	0	97.6	50	150			J
Silver	0.0047	0.0050	0.005000	0	94.7	50	150			J
Sodium	0.52	1.0	0.5000	0	103	50	150			J
Zinc	0.012	0.010	0.01000	0	120	50	150			

Sample ID: **MB-45501** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45501** RunNo: **60602**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45501** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45501** RunNo: **60602**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45501** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45501** RunNo: **60602**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050354** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	122	50	150			J
Barium	0.0026	0.0020	0.002000	0	131	50	150			
Beryllium	0.0021	0.0020	0.002000	0	106	50	150			
Boron	0.040	0.040	0.04000	0	98.8	50	150			J
Cadmium	0.0015	0.0020	0.002000	0	75.5	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.7	50	150			J
Cobalt	0.0049	0.0060	0.006000	0	82.4	50	150			J
Copper	0.0064	0.0060	0.006000	0	107	50	150			
Iron	0.027	0.020	0.02000	0	137	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0039	0.010	0.005000	0	78.0	50	150			J
Silver	0.0054	0.0050	0.005000	0	109	50	150			
Zinc	0.015	0.010	0.01000	0	150	50	150			

Sample ID: **LCS-45501** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45501** RunNo: **60602**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	101	85	115			
Barium	0.48	0.0020	0.5000	0	95.3	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.0	85	115			
Boron	0.47	0.040	0.5000	0	94.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.0	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45501** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45501** RunNo: **60602**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Molybdenum	0.47	0.0080	0.5000	0	94.5	85	115			
Nickel	0.48	0.010	0.5000	0	96.4	85	115			
Silver	0.098	0.0050	0.1000	0	98.3	85	115			
Zinc	0.47	0.010	0.5000	0	93.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047470** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	104	85	115			
Barium	0.47	0.0020	0.5000	0	93.2	85	115			
Beryllium	0.47	0.0020	0.5000	0	93.7	85	115			
Boron	0.47	0.040	0.5000	0	94.4	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.7	85	115			
Calcium	49	1.0	50.00	0	98.3	85	115			
Chromium	0.47	0.0060	0.5000	0	94.5	85	115			
Cobalt	0.46	0.0060	0.5000	0	92.1	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.47	0.020	0.5000	0	94.1	85	115			
Magnesium	49	1.0	50.00	0	98.6	85	115			
Manganese	0.47	0.0020	0.5000	0	93.7	85	115			
Molybdenum	0.47	0.0080	0.5000	0	94.5	85	115			
Nickel	0.47	0.010	0.5000	0	93.8	85	115			
Potassium	49	1.0	50.00	0	97.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047470** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.2	85	115			
Sodium	49	1.0	50.00	0	97.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.0	85	115			

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60520** RunNo: **60520**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2047472** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	121	50	150			J
Barium	0.0020	0.0020	0.002000	0	98.9	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	96.2	50	150			J
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0020	0.0020	0.002000	0	98.3	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0072	0.0060	0.006000	0	120	50	150			
Cobalt	0.0055	0.0060	0.006000	0	92.0	50	150			J
Copper	0.0070	0.0060	0.006000	0	116	50	150			
Iron	0.019	0.020	0.02000	0	94.6	50	150			J
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0053	0.010	0.005000	0	107	50	150			J
Potassium	0.49	1.0	0.5000	0	97.6	50	150			J
Silver	0.0047	0.0050	0.005000	0	94.7	50	150			J
Sodium	0.52	1.0	0.5000	0	103	50	150			J
Zinc	0.012	0.010	0.01000	0	120	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45501** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **45501** RunNo: **60635**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2051354** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-45501** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **45501** RunNo: **60635**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2051356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00083	0.0010	0.001000	0	82.6	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00050	0.00050	0.0005000	0	99.8	50	150			J
Selenium	0.00088	0.0010	0.001000	0	88.3	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	93.0	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.3	50	150			J

Sample ID: **MSLCS-45501** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **45501** RunNo: **60635**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2051358** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	102	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.6	85	115			
Lead	0.012	0.00050	0.01250	0	96.6	85	115			
Selenium	0.025	0.0010	0.02500	0	99.0	85	115			
Thallium	0.012	0.00050	0.01250	0	96.7	85	115			
Uranium	0.012	0.00050	0.01250	0	95.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045375** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045376** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00088	0.0010	0.001000	0	88.0	50	150			J
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.0012	0.0010	0.001000	0	120	50	150			
Thallium	0.00047	0.00050	0.0005000	0	94.5	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **D60465** RunNo: **60465**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.1	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.6	85	115			
Lead	0.012	0.00050	0.01250	0	97.9	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Thallium	0.012	0.00050	0.01250	0	97.5	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048010** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048011** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00094	0.0010	0.001000	0	94.2	50	150			J
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00048	0.00050	0.0005000	0	95.6	50	150			J
Selenium	0.0011	0.0010	0.001000	0	108	50	150			
Thallium	0.00047	0.00050	0.0005000	0	93.5	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B60533** RunNo: **60533**
Prep Date: Analysis Date: **6/10/2019** SeqNo: **2048014** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.6	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.012	0.00050	0.01250	0	95.5	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.012	0.00050	0.01250	0	95.8	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB-45661**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **45661**	RunNo: **60774**
Prep Date: **6/18/2019**	Analysis Date: **6/19/2019**	SeqNo: **2056745** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-45661**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **45661**	RunNo: **60774**
Prep Date: **6/18/2019**	Analysis Date: **6/19/2019**	SeqNo: **2056746** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.0	80	120			

Sample ID: **1906248-003DMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **OW-30**	Batch ID: **45661**	RunNo: **60774**
Prep Date: **6/18/2019**	Analysis Date: **6/19/2019**	SeqNo: **2056792** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.0010	0.005000	0	104	75	125			

Sample ID: **1906248-003DMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **OW-30**	Batch ID: **45661**	RunNo: **60774**
Prep Date: **6/18/2019**	Analysis Date: **6/19/2019**	SeqNo: **2056793** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.0010	0.005000	0	101	75	125	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R60475** RunNo: **60475**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045700** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R60475** RunNo: **60475**
Prep Date: Analysis Date: **6/6/2019** SeqNo: **2045701** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	90	110			
Chloride	4.9	0.50	5.000	0	97.5	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.1	90	110			
Bromide	2.4	0.10	2.500	0	97.9	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.1	90	110			
Sulfate	10	0.50	10.00	0	99.8	90	110			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R60755** RunNo: **60755**
Prep Date: Analysis Date: **6/18/2019** SeqNo: **2055939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R60755** RunNo: **60755**
Prep Date: Analysis Date: **6/18/2019** SeqNo: **2055940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**

24-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **LCS-45489**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **45489**	RunNo: **60565**
Prep Date: **6/11/2019**	Analysis Date: **6/11/2019**	SeqNo: **2049186** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.088	0.010	0.1000	0	87.7	70	130			

Sample ID: **MB-45489**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **45489**	RunNo: **60565**
Prep Date: **6/11/2019**	Analysis Date: **6/11/2019**	SeqNo: **2049187** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**

24-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **1906248-003CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-30**	Batch ID: **45448**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/11/2019**	SeqNo: **2047827** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.4	1.0	5.000	0.9722	108	68.1	137			
Surr: DNOP	0.36		0.5000		72.2	70	130			

Sample ID: **1906248-003CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-30**	Batch ID: **45448**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/11/2019**	SeqNo: **2047828** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.7	1.0	5.000	0.9722	115	68.1	137	5.38	20	
Surr: DNOP	0.41		0.5000		81.0	70	130	0	0	

Sample ID: **LCS-45448**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **45448**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/11/2019**	SeqNo: **2047834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	71.8	135			
Surr: DNOP	0.29		0.5000		57.5	70	130			S

Sample ID: **MB-45448**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **45448**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/11/2019**	SeqNo: **2047835** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.73		1.000		73.2	70	130			

Sample ID: **LCS-45448**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **45448**	RunNo: **60572**
Prep Date: **6/7/2019**	Analysis Date: **6/12/2019**	SeqNo: **2049380** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	71.8	135			
Surr: DNOP	0.56		0.5000		112	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045030** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.0	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G60459**	RunNo: **60459**
Prep Date:	Analysis Date: **6/6/2019**	SeqNo: **2045031** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.1	77.7	130			
Surr: BFB	21		20.00		107	72.8	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W60676**	RunNo: **60676**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2053184** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W60676**	RunNo: **60676**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2053184** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.1	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.7	70	130			
Surr: Dibromofluoromethane	7.4		10.00		74.0	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W60676**	RunNo: **60676**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2053185** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	17	1.0	20.00	0	87.0	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**

24-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W60676**	RunNo: **60676**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2053185** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	94.3	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.0	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.2	70	130			
Surr: Toluene-d8	9.8		10.00		98.0	70	130			

Sample ID: **1906248-003a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-30**	Batch ID: **W60676**	RunNo: **60676**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2053190** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	110	5.0	100.0	0	110	70	130			
Toluene	100	5.0	100.0	0	99.7	70	130			
Chlorobenzene	100	5.0	100.0	0	102	70	130			
1,1-Dichloroethene	94	5.0	100.0	0	93.7	67.6	130			
Trichloroethene (TCE)	86	5.0	100.0	0	85.6	70	130			
Surr: 1,2-Dichloroethane-d4	47		50.00		94.7	70	130			
Surr: 4-Bromofluorobenzene	53		50.00		105	70	130			
Surr: Dibromofluoromethane	42		50.00		84.9	70	130			
Surr: Toluene-d8	50		50.00		100	70	130			

Sample ID: **1906248-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-30**	Batch ID: **W60676**	RunNo: **60676**
Prep Date:	Analysis Date: **6/14/2019**	SeqNo: **2053191** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	98	5.0	100.0	0	98.3	70	130	11.0	20	
Toluene	93	5.0	100.0	0	93.0	70	130	6.96	20	
Chlorobenzene	93	5.0	100.0	0	93.2	70	130	9.28	20	
1,1-Dichloroethene	87	5.0	100.0	0	86.7	67.6	130	7.80	20	
Trichloroethene (TCE)	76	5.0	100.0	0	75.6	70	130	12.5	20	
Surr: 1,2-Dichloroethane-d4	46		50.00		91.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	51		50.00		103	70	130	0	0	
Surr: Dibromofluoromethane	41		50.00		81.7	70	130	0	0	
Surr: Toluene-d8	50		50.00		100	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**

24-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **1906248-005cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050581** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	92	10	100.0	0	91.7	30	94			
4-Chloro-3-methylphenol	92	10	100.0	0	91.9	30.9	101			
2-Chlorophenol	87	10	100.0	0	87.2	15.8	96.2			
1,4-Dichlorobenzene	71	10	100.0	0	71.2	25.6	87.2			
2,4-Dinitrotoluene	90	10	100.0	0	89.7	29.5	85.8			S
N-Nitrosodi-n-propylamine	96	10	100.0	0	96.1	28.6	108			
4-Nitrophenol	37	10	100.0	0	36.8	15	59.7			
Pentachlorophenol	64	20	100.0	0	63.9	21.1	99.4			
Phenol	120	10	100.0	62.00	60.6	15	61.9			
Pyrene	89	10	100.0	0	88.7	37.5	105			
1,2,4-Trichlorobenzene	85	10	100.0	0	85.2	17.1	98.7			
Surr: 2-Fluorophenol	180		200.0		88.6	15	101			
Surr: Phenol-d5	160		200.0		77.5	15	84.6			
Surr: 2,4,6-Tribromophenol	250		200.0		126	27.8	112			S
Surr: Nitrobenzene-d5	210		200.0		107	33	113			
Surr: 2-Fluorobiphenyl	200		200.0		99.1	26.6	107			
Surr: 4-Terphenyl-d14	170		200.0		84.3	18.7	148			

Sample ID: **1906248-005cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050582** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	83.8	30	94	8.98	47.7	
4-Chloro-3-methylphenol	82	10	100.0	0	82.1	30.9	101	11.3	54.7	
2-Chlorophenol	74	10	100.0	0	74.2	15.8	96.2	16.0	40.9	
1,4-Dichlorobenzene	53	10	100.0	0	53.2	25.6	87.2	28.9	46.8	
2,4-Dinitrotoluene	79	10	100.0	0	79.3	29.5	85.8	12.3	49.8	
N-Nitrosodi-n-propylamine	82	10	100.0	0	82.3	28.6	108	15.6	45.2	
4-Nitrophenol	19	10	100.0	0	18.8	15	59.7	64.7	82.1	
Pentachlorophenol	52	20	100.0	0	51.7	21.1	99.4	21.1	52	
Phenol	100	10	100.0	62.00	39.0	15	61.9	19.3	61.9	
Pyrene	78	10	100.0	0	78.3	37.5	105	12.5	39.9	
1,2,4-Trichlorobenzene	68	10	100.0	0	68.0	17.1	98.7	22.5	47.5	
Surr: 2-Fluorophenol	150		200.0		74.3	15	101	0	0	
Surr: Phenol-d5	120		200.0		61.9	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	210		200.0		107	27.8	112	0	0	
Surr: Nitrobenzene-d5	170		200.0		82.6	33	113	0	0	
Surr: 2-Fluorobiphenyl	170		200.0		84.2	26.6	107	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**

24-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **1906248-005cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050582** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	140		200.0		72.2	18.7	148	0	0	

Sample ID: **lcs-45493** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSW** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050585** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	120	10	100.0	0	115	32.2	94			S
4-Chloro-3-methylphenol	100	10	100.0	0	104	37.7	101			S
2-Chlorophenol	97	10	100.0	0	97.2	32.6	90.1			S
1,4-Dichlorobenzene	62	10	100.0	0	61.9	30	87.2			
2,4-Dinitrotoluene	98	10	100.0	0	97.8	35.9	85.8			S
N-Nitrosodi-n-propylamine	99	10	100.0	0	99.3	37.1	108			
4-Nitrophenol	64	10	100.0	0	64.0	22.4	86.6			
Pentachlorophenol	69	20	100.0	0	68.7	31.6	91			
Phenol	64	10	100.0	0	63.8	21.7	84.9			
Pyrene	93	10	100.0	0	92.7	46.3	103			
1,2,4-Trichlorobenzene	75	10	100.0	0	74.6	30.2	88.3			
Surr: 2-Fluorophenol	190		200.0		95.0	15	101			
Surr: Phenol-d5	160		200.0		78.3	15	84.6			
Surr: 2,4,6-Tribromophenol	290		200.0		145	27.8	112			S
Surr: Nitrobenzene-d5	200		200.0		99.6	33	113			
Surr: 2-Fluorobiphenyl	190		200.0		93.5	26.6	107			
Surr: 4-Terphenyl-d14	160		200.0		80.7	18.7	148			

Sample ID: **mb-45493** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **PBW** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **mb-45493** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **45493** RunNo: **60605**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	6.7	10								J
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	6.0	10								J
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **mb-45493**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **45493**	RunNo: **60605**
Prep Date: **6/11/2019**	Analysis Date: **6/12/2019**	SeqNo: **2050586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	2.7	10								J
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		59.0	15	101			
Surr: Phenol-d5	95		200.0		47.3	15	84.6			
Surr: 2,4,6-Tribromophenol	140		200.0		70.2	27.8	112			
Surr: Nitrobenzene-d5	79		100.0		79.1	33	113			
Surr: 2-Fluorobiphenyl	71		100.0		71.5	26.6	107			
Surr: 4-Terphenyl-d14	66		100.0		66.3	18.7	148			

Sample ID: **lcs-45493**	SampType: **LCS4**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC**	Batch ID: **45493**	RunNo: **60605**
Prep Date: **6/11/2019**	Analysis Date: **6/12/2019**	SeqNo: **2050587** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	120	10	100.0	0	115	48.1	117			
Acenaphthylene	99	10	100.0	0	98.5	47.8	116			
Aniline	64	10	100.0	0	63.7	29.6	112			
Anthracene	99	10	100.0	0	98.8	41.6	124			
Azobenzene	100	10	100.0	0	100	50	127			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **lcs-45493** SampType: **LCS4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **45493** RunNo: **60605**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050587** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benz(a)anthracene	56	10	100.0	0	55.8	48.8	122			
Benzo(a)pyrene	62	10	100.0	0	61.8	53.6	127			
Benzo(b)fluoranthene	62	10	100.0	0	62.1	55.1	130			
Benzo(g,h,i)perylene	130	10	100.0	0	128	46.3	126			S
Benzo(k)fluoranthene	59	10	100.0	0	58.7	55.3	127			
Benzoic acid	74	20	100.0	0	74.3	15	101			
Benzyl alcohol	100	10	100.0	0	101	38	120			
Bis(2-chloroethoxy)methane	99	10	100.0	0	98.6	39.4	124			
Bis(2-chloroethyl)ether	99	10	100.0	0	98.9	33.8	122			
Bis(2-chloroisopropyl)ether	110	10	100.0	0	106	50.4	91			S
Bis(2-ethylhexyl)phthalate	120	10	100.0	0	120	34.4	148			
4-Bromophenyl phenyl ether	94	10	100.0	0	94.5	47.2	121			
Butyl benzyl phthalate	93	10	100.0	0	93.3	49	125			
Carbazole	110	10	100.0	0	112	50.6	121			
4-Chloro-3-methylphenol	100	10	100.0	0	104	45.9	130			
4-Chloroaniline	96	10	100.0	0	96.0	41.4	123			
2-Chloronaphthalene	100	10	100.0	0	100	39.7	117			
2-Chlorophenol	97	10	100.0	0	97.2	33	120			
4-Chlorophenyl phenyl ether	94	10	100.0	0	94.3	52.1	115			
Chrysene	90	10	100.0	0	90.2	50.5	121			
Di-n-butyl phthalate	94	10	100.0	0	94.4	50.6	121			
Di-n-octyl phthalate	100	10	100.0	0	100	44.9	130			
Dibenz(a,h)anthracene	130	10	100.0	0	125	50.5	131			
Dibenzofuran	100	10	100.0	0	102	53.7	119			
1,2-Dichlorobenzene	65	10	100.0	0	65.0	27.2	93.8			
1,3-Dichlorobenzene	60	10	100.0	0	59.9	21.9	90.6			
1,4-Dichlorobenzene	62	10	100.0	0	61.9	25	91.6			
3,3´-Dichlorobenzidine	64	10	100.0	0	64.1	49.4	114			
Diethyl phthalate	110	10	100.0	0	108	51.8	123			
Dimethyl phthalate	110	10	100.0	0	109	53.7	123			
2,4-Dichlorophenol	90	20	100.0	0	90.0	39.8	122			
2,4-Dimethylphenol	88	10	100.0	0	88.2	40.4	117			
4,6-Dinitro-2-methylphenol	96	20	100.0	0	96.1	42.7	121			
2,4-Dinitrophenol	92	20	100.0	0	92.1	25.4	120			
2,4-Dinitrotoluene	98	10	100.0	0	97.8	50.4	124			
2,6-Dinitrotoluene	120	10	100.0	0	120	54.7	129			
Fluoranthene	100	10	100.0	0	101	54	119			
Fluorene	110	10	100.0	0	106	54.5	118			
Hexachlorobenzene	96	10	100.0	0	96.4	50.1	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**

24-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **lcs-45493** SampType: **LCS4** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **BatchQC** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050587** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	48	10	100.0	0	48.3	15	103			
Hexachlorocyclopentadiene	57	10	100.0	0	57.3	15	104			
Hexachloroethane	52	10	100.0	0	51.9	15	94.2			
Indeno(1,2,3-cd)pyrene	120	10	100.0	0	124	49.2	129			
Isophorone	98	10	100.0	0	98.2	44.4	125			
1-Methylnaphthalene	82	10	100.0	0	81.7	34.4	118			
2-Methylnaphthalene	78	10	100.0	0	78.1	32.2	115			
2-Methylphenol	98	10	100.0	0	97.6	33.8	121			
3+4-Methylphenol	90	10	100.0	0	90.0	33.6	109			
N-Nitrosodi-n-propylamine	99	10	100.0	0	99.3	50.7	117			
N-Nitrosodimethylamine	86	10	100.0	0	85.8	23.8	111			
N-Nitrosodiphenylamine	90	10	100.0	0	90.1	48.8	119			
Naphthalene	76	10	100.0	0	75.7	26.1	110			
2-Nitroaniline	120	10	100.0	0	121	52	128			
3-Nitroaniline	110	10	100.0	0	113	54.4	126			
4-Nitroaniline	100	10	100.0	0	105	54.9	124			
Nitrobenzene	96	10	100.0	0	95.8	32.4	125			
2-Nitrophenol	94	10	100.0	0	93.7	39.3	120			
4-Nitrophenol	64	10	100.0	0	64.0	20.8	87.2			
Pentachlorophenol	69	20	100.0	0	68.7	44.6	114			
Phenanthrene	100	10	100.0	0	102	45.7	121			
Phenol	64	10	100.0	0	63.8	15	93.2			
Pyrene	93	10	100.0	0	92.7	50.8	123			
Pyridine	19	10	100.0	0	18.8	15	67			
1,2,4-Trichlorobenzene	75	10	100.0	0	74.6	28.7	112			
2,4,5-Trichlorophenol	93	10	100.0	0	92.6	49.4	118			
2,4,6-Trichlorophenol	94	10	100.0	0	94.5	50.3	116			
Surr: 2-Fluorophenol	190		200.0		95.0	15	101			
Surr: Phenol-d5	160		200.0		78.3	15	84.6			
Surr: 2,4,6-Tribromophenol	290		200.0		145	27.8	112			S
Surr: Nitrobenzene-d5	200		200.0		99.6	33	113			
Surr: 2-Fluorobiphenyl	190		200.0		93.5	26.6	107			
Surr: 4-Terphenyl-d14	160		200.0		80.7	18.7	148			

Sample ID: **1906248-005cms** SampType: **MS4** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **1906248-005cms** SampType: **MS4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	92	10	100.0	0	91.7	51.4	106			
Acenaphthylene	90	10	100.0	0	89.6	52	106			
Aniline	79	10	100.0	0	79.3	38.8	103			
Anthracene	88	10	100.0	0	88.2	50.5	120			
Azobenzene	90	10	100.0	0	90.3	57.2	119			
Benz(a)anthracene	69	10	100.0	0	69.0	30	114			
Benzo(a)pyrene	57	10	100.0	0	57.0	49.8	120			
Benzo(b)fluoranthene	58	10	100.0	0	57.8	50.1	118			
Benzo(g,h,i)perylene	110	10	100.0	0	115	50.1	118			
Benzo(k)fluoranthene	54	10	100.0	0	53.6	41.7	126			
Benzoic acid	26	20	100.0	25.40	0.780	3.46	46.8			S
Benzyl alcohol	89	10	100.0	0	88.6	50	104			
Bis(2-chloroethoxy)methane	89	10	100.0	0	88.8	52.6	107			
Bis(2-chloroethyl)ether	92	10	100.0	0	91.8	48.7	110			
Bis(2-chloroisopropyl)ether	98	10	100.0	0	98.3	42.3	115			
Bis(2-ethylhexyl)phthalate	120	10	100.0	5.600	115	42.3	108			S
4-Bromophenyl phenyl ether	90	10	100.0	0	89.5	54.5	118			
Butyl benzyl phthalate	88	10	100.0	0	87.8	60.5	112			
Carbazole	85	10	100.0	0	84.6	53.2	114			
4-Chloro-3-methylphenol	92	10	100.0	0	91.9	53.3	104			
4-Chloroaniline	83	10	100.0	0	83.0	48	104			
2-Chloronaphthalene	97	10	100.0	0	96.5	57.3	105			
2-Chlorophenol	87	10	100.0	0	87.2	24.5	106			
4-Chlorophenyl phenyl ether	87	10	100.0	0	86.7	49.2	102			
Chrysene	87	10	100.0	0	87.1	54.5	109			
Di-n-butyl phthalate	81	10	100.0	0	80.9	57	118			
Di-n-octyl phthalate	95	10	100.0	5.240	89.8	61.5	111			
Dibenz(a,h)anthracene	120	10	100.0	0	116	45.1	128			
Dibenzofuran	93	10	100.0	0	92.7	51.3	102			
1,2-Dichlorobenzene	65	10	100.0	0	65.4	43.4	99.8			
1,3-Dichlorobenzene	67	10	100.0	0	67.0	40.4	95.8			
1,4-Dichlorobenzene	71	10	100.0	0	71.2	47.4	94			
3,3´-Dichlorobenzidine	41	10	100.0	0	41.3	38.1	116			
Diethyl phthalate	91	10	100.0	0	91.4	53.8	114			
Dimethyl phthalate	98	10	100.0	0	98.3	52.8	116			
2,4-Dichlorophenol	81	20	100.0	0	81.4	23.9	113			
2,4-Dimethylphenol	86	10	100.0	0	85.7	48.3	109			
4,6-Dinitro-2-methylphenol	52	20	100.0	0	51.8	12.2	96.9			
2,4-Dinitrophenol	19	20	100.0	6.960	12.1	3.79	63.2			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **1906248-005cms** SampType: **MS4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	90	10	100.0	0	89.7	49.5	111			
2,6-Dinitrotoluene	110	10	100.0	0	107	48.3	114			
Fluoranthene	90	10	100.0	0	89.8	50.6	115			
Fluorene	98	10	100.0	4.860	93.2	52.2	106			
Hexachlorobenzene	85	10	100.0	0	85.0	56.1	107			
Hexachlorobutadiene	75	10	100.0	0	75.1	40.4	102			
Hexachlorocyclopentadiene	69	10	100.0	0	69.0	37.7	93.9			
Hexachloroethane	70	10	100.0	0	70.3	40.6	94.4			
Indeno(1,2,3-cd)pyrene	110	10	100.0	0	113	52.4	113			
Isophorone	93	10	100.0	0	92.8	59.3	104			
1-Methylnaphthalene	170	10	100.0	84.74	86.4	47.6	106			
2-Methylnaphthalene	150	10	100.0	60.60	87.5	44.7	110			
2-Methylphenol	90	10	100.0	0	89.8	51.4	101			
3+4-Methylphenol	80	10	100.0	6.800	73.6	45.2	97.8			
N-Nitrosodi-n-propylamine	96	10	100.0	0	96.1	46.2	106			
N-Nitrosodimethylamine	76	10	100.0	0	75.9	46.9	105			
N-Nitrosodiphenylamine	79	10	100.0	0	78.6	53.4	111			
Naphthalene	230	10	100.0	142.0	89.4	49.7	105			
2-Nitroaniline	100	10	100.0	0	104	49.3	112			
3-Nitroaniline	100	10	100.0	3.940	96.2	43.5	114			
4-Nitroaniline	95	10	100.0	0	95.0	43	113			
Nitrobenzene	100	10	100.0	0	102	51.7	107			
2-Nitrophenol	94	10	100.0	4.880	89.5	14	117			
4-Nitrophenol	37	10	100.0	0	36.8	10.7	73.6			
Pentachlorophenol	64	20	100.0	0	63.9	3.22	76.1			
Phenanthrene	90	10	100.0	0	90.1	54.6	113			
Phenol	120	10	100.0	62.00	60.6	14.1	93.4			
Pyrene	89	10	100.0	0	88.7	52.8	114			
Pyridine	67	10	100.0	0	66.9	35.5	87.2			
1,2,4-Trichlorobenzene	85	10	100.0	0	85.2	44.8	102			
2,4,5-Trichlorophenol	93	10	100.0	0	92.5	12.3	115			
2,4,6-Trichlorophenol	82	10	100.0	0	81.8	3.62	109			
Surr: 2-Fluorophenol	180		200.0		88.6	15	101			
Surr: Phenol-d5	160		200.0		77.5	15	84.6			
Surr: 2,4,6-Tribromophenol	250		200.0		126	27.8	112			S
Surr: Nitrobenzene-d5	210		200.0		107	33	113			
Surr: 2-Fluorobiphenyl	200		200.0		99.1	26.6	107			
Surr: 4-Terphenyl-d14	170		200.0		84.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**
24-Jun-19

Client: MARATHON GALLUP
Project: 2019 2ND QTR GW Samples

Sample ID: **1906248-005cmsd** SampType: **MSD4** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**
Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050599** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	83.8	51.4	106	8.98	20	
Acenaphthylene	81	10	100.0	0	80.7	52	106	10.5	20	
Aniline	57	10	100.0	0	56.6	38.8	103	33.5	20	R
Anthracene	78	10	100.0	0	78.3	50.5	120	11.8	20	
Azobenzene	79	10	100.0	0	78.6	57.2	119	13.9	20	
Benz(a)anthracene	47	10	100.0	0	46.6	30	114	38.6	20	R
Benzo(a)pyrene	53	10	100.0	0	52.7	49.8	120	7.84	20	
Benzo(b)fluoranthene	52	10	100.0	0	52.4	50.1	118	9.81	20	
Benzo(g,h,i)perylene	100	10	100.0	0	101	50.1	118	12.8	20	
Benzo(k)fluoranthene	48	10	100.0	0	48.5	41.7	126	9.99	20	
Benzoic acid	24	20	100.0	25.40	-0.900	3.46	46.8	6.63	20	S
Benzyl alcohol	75	10	100.0	0	74.6	50	104	17.1	20	
Bis(2-chloroethoxy)methane	76	10	100.0	0	76.2	52.6	107	15.2	20	
Bis(2-chloroethyl)ether	78	10	100.0	0	78.5	48.7	110	15.7	20	
Bis(2-chloroisopropyl)ether	79	10	100.0	0	79.4	42.3	115	21.3	20	R
Bis(2-ethylhexyl)phthalate	100	10	100.0	5.600	94.2	42.3	108	18.8	20	
4-Bromophenyl phenyl ether	82	10	100.0	0	81.7	54.5	118	9.21	20	
Butyl benzyl phthalate	80	10	100.0	0	79.9	60.5	112	9.37	20	
Carbazole	76	10	100.0	0	75.7	53.2	114	11.2	20	
4-Chloro-3-methylphenol	82	10	100.0	0	82.1	53.3	104	11.3	20	
4-Chloroaniline	73	10	100.0	0	73.1	48	104	12.6	20	
2-Chloronaphthalene	85	10	100.0	0	85.4	57.3	105	12.2	20	
2-Chlorophenol	74	10	100.0	0	74.2	24.5	106	16.0	20	
4-Chlorophenyl phenyl ether	76	10	100.0	0	76.2	49.2	102	12.9	20	
Chrysene	76	10	100.0	0	76.5	54.5	109	13.0	20	
Di-n-butyl phthalate	73	10	100.0	0	72.6	57	118	10.8	20	
Di-n-octyl phthalate	82	10	100.0	5.240	76.6	61.5	111	15.0	20	
Dibenz(a,h)anthracene	100	10	100.0	0	105	45.1	128	9.96	20	
Dibenzofuran	84	10	100.0	0	84.3	51.3	102	9.47	20	
1,2-Dichlorobenzene	50	10	100.0	0	50.0	43.4	99.8	26.7	20	R
1,3-Dichlorobenzene	49	10	100.0	0	49.4	40.4	95.8	30.1	20	R
1,4-Dichlorobenzene	53	10	100.0	0	53.2	47.4	94	28.9	20	R
3,3´-Dichlorobenzidine	48	10	100.0	0	47.6	38.1	116	14.3	20	
Diethyl phthalate	82	10	100.0	0	82.1	53.8	114	10.7	20	
Dimethyl phthalate	87	10	100.0	0	87.0	52.8	116	12.2	20	
2,4-Dichlorophenol	73	20	100.0	0	72.8	23.9	113	11.2	20	
2,4-Dimethylphenol	76	10	100.0	0	75.6	48.3	109	12.6	20	
4,6-Dinitro-2-methylphenol	31	20	100.0	0	31.3	12.2	96.9	49.4	20	R
2,4-Dinitrophenol	8.1	20	100.0	6.960	1.14	3.79	63.2	80.7	20	JRS

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906248**

24-Jun-19

Client: MARATHON GALLUP

Project: 2019 2ND QTR GW Samples

Sample ID: **1906248-005cmsd** SampType: **MSD4** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-58** Batch ID: **45493** RunNo: **60605**

Prep Date: **6/11/2019** Analysis Date: **6/12/2019** SeqNo: **2050599** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	79	10	100.0	0	79.3	49.5	111	12.3	20	
2,6-Dinitrotoluene	94	10	100.0	0	93.9	48.3	114	13.0	20	
Fluoranthene	83	10	100.0	0	83.1	50.6	115	7.68	20	
Fluorene	89	10	100.0	4.860	84.4	52.2	106	9.39	20	
Hexachlorobenzene	77	10	100.0	0	77.2	56.1	107	9.72	20	
Hexachlorobutadiene	59	10	100.0	0	58.8	40.4	102	24.3	20	R
Hexachlorocyclopentadiene	60	10	100.0	0	59.8	37.7	93.9	14.4	20	
Hexachloroethane	56	10	100.0	0	56.0	40.6	94.4	22.6	20	R
Indeno(1,2,3-cd)pyrene	100	10	100.0	0	102	52.4	113	10.1	20	
Isophorone	82	10	100.0	0	82.5	59.3	104	11.8	20	
1-Methylnaphthalene	150	10	100.0	84.74	69.0	47.6	106	10.7	20	
2-Methylnaphthalene	120	10	100.0	60.60	59.3	44.7	110	21.0	20	R
2-Methylphenol	78	10	100.0	0	78.5	51.4	101	13.5	20	
3+4-Methylphenol	68	10	100.0	6.800	61.3	45.2	97.8	16.5	20	
N-Nitrosodi-n-propylamine	82	10	100.0	0	82.3	46.2	106	15.6	20	
N-Nitrosodimethylamine	68	10	100.0	0	67.6	46.9	105	11.6	20	
N-Nitrosodiphenylamine	76	10	100.0	0	75.9	53.4	111	3.55	20	
Naphthalene	210	10	100.0	142.0	69.6	49.7	105	8.92	20	
2-Nitroaniline	94	10	100.0	0	94.1	49.3	112	9.63	20	
3-Nitroaniline	91	10	100.0	3.940	87.4	43.5	114	9.22	20	
4-Nitroaniline	81	10	100.0	0	80.6	43	113	16.4	20	
Nitrobenzene	82	10	100.0	0	81.9	51.7	107	21.7	20	R
2-Nitrophenol	83	10	100.0	4.880	78.2	14	117	12.7	20	
4-Nitrophenol	19	10	100.0	0	18.8	10.7	73.6	64.7	20	R
Pentachlorophenol	52	20	100.0	0	51.7	3.22	76.1	21.1	20	R
Phenanthrene	82	10	100.0	0	81.5	54.6	113	10.1	20	
Phenol	100	10	100.0	62.00	39.0	14.1	93.4	19.3	20	
Pyrene	78	10	100.0	0	78.3	52.8	114	12.5	20	
Pyridine	58	10	100.0	0	58.2	35.5	87.2	13.8	20	
1,2,4-Trichlorobenzene	68	10	100.0	0	68.0	44.8	102	22.5	20	R
2,4,5-Trichlorophenol	81	10	100.0	0	81.3	12.3	115	12.9	20	
2,4,6-Trichlorophenol	72	10	100.0	0	72.1	3.62	109	12.6	20	
Surr: 2-Fluorophenol	150		200.0		74.3	15	101	0		
Surr: Phenol-d5	120		200.0		61.9	15	84.6	0		
Surr: 2,4,6-Tribromophenol	210		200.0		107	27.8	112	0		
Surr: Nitrobenzene-d5	170		200.0		82.6	33	113	0		
Surr: 2-Fluorobiphenyl	170		200.0		84.2	26.6	107	0		
Surr: 4-Terphenyl-d14	140		200.0		72.2	18.7	148	0		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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P	Sample pH Not In Range
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1906248** RcptNo: **1**

Received By: **Desiree Dominguez** **6/5/2019 4:05:00 PM** DD

Completed By: **Erin Melendrez** **6/6/2019 7:15:19 AM** EM

Reviewed By: LB 6/6/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐

Samples were collected the same day and chilled.

5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☑ No ☑ JJC 6-6-19 NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 9 (<2 or >12 unless noted)
Adjusted? yes
Checked by: JJC 6-6-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks: ~ 0.4 ml HNO3 was added to 005F for <2 pH for metals analysis.
~ 0.5 ml HNO3 was added to 004D for <2 pH for metals analysis. JJC 6-6-19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	6.7	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - WESTERN REFINING SW

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:
X Standard ☐ Rush_____

Project Name:
2019 2ND QTR GW SAMPLES

Project #:
OW-30, OW-58, MKTF-39

Project Manager:
Brian Moore

Sampler: C. JOHNSON (CAJohnson1@marathonpetroleum.com)

On Ice: ☒ Yes ☐ No

Sample Temperature: 6.2+0.5 = 6.7°c

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1906248	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS	8011 FOR EDB	8021B (BTEX)	BOD	COD	TDS	TSS			Air Bubbles (Y or N)
							Analysis Request														
6/5/2019	730	aqueous	FIELD BLANK	3-40ML VOAS	HCL	-001	X														
6/5/2019	730	aqueous	TRIP BLANK	3-40ML VOAS	HCL	-002	X														
6/5/2019	822	aqueous	OW-30	Misc	Misc	-003	X	X	X	X			X								
6/5/2019	822	aqueous	DUPLICATE	Misc	Misc	-004	X	X	X	X			X								
6/5/2019	924	aqueous	OW-58	Misc	Misc	-005	X	X	X	X	2	X									
6/5/2019	1255	aqueous	MKTF-39	Misc	Misc	-006	X	X	X	X	X	X									

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/5/19	1400			6/5/19	14:10
6/5/19	1605			6/5/19	16:05

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 16, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2019 2nd QTR GW Samples OrderNo.: 1906F76

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/27/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 8:00:00 AM
Lab ID: 1906F76-001 **Matrix:** AQUEOUS **Received Date:** 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Toluene	ND	0.35	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Ethylbenzene	ND	0.13	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Naphthalene	ND	0.28	2.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Acetone	3.4	1.2	10	J	µg/L	1	7/8/2019 1:10:00 PM	R6122(
Bromobenzene	ND	0.24	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Bromodichloromethane	ND	0.13	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Bromoform	ND	0.29	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Bromomethane	ND	0.27	3.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
2-Butanone	ND	2.1	10		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Carbon disulfide	ND	0.45	10		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Chlorobenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Chloroethane	ND	0.18	2.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Chloroform	ND	0.12	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Chloromethane	ND	0.32	3.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Dibromochloromethane	ND	0.24	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Dibromomethane	ND	0.21	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 8:00:00 AM
Lab ID: 1906F76-001 **Matrix:** AQUEOUS **Received Date:** 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
2-Hexanone	ND	1.5	10		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Isopropylbenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Methylene Chloride	ND	0.15	3.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
n-Butylbenzene	ND	0.23	3.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
n-Propylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Styrene	ND	0.19	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Xylenes, Total	ND	0.45	1.5		µg/L	1	7/8/2019 1:10:00 PM	R6122(
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	7/8/2019 1:10:00 PM	R6122(
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	7/8/2019 1:10:00 PM	R6122(
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	7/8/2019 1:10:00 PM	R6122(
Surr: Toluene-d8	96.1	0	70-130		%Rec	1	7/8/2019 1:10:00 PM	R6122(

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 8:00:00 AM
Lab ID: 1906F76-002
Matrix: TRIP BLANK
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Toluene	ND	0.35	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Ethylbenzene	ND	0.13	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Naphthalene	ND	0.28	2.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Acetone	2.4	1.2	10	J	µg/L	1	7/8/2019 1:34:00 PM	R6122C
Bromobenzene	ND	0.24	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Bromodichloromethane	ND	0.13	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Bromoform	ND	0.29	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Bromomethane	ND	0.27	3.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
2-Butanone	ND	2.1	10		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Carbon disulfide	ND	0.45	10		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Chlorobenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Chloroethane	ND	0.18	2.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Chloroform	ND	0.12	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Chloromethane	ND	0.32	3.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Dibromochloromethane	ND	0.24	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Dibromomethane	ND	0.21	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	7/8/2019 1:34:00 PM	R6122C

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 8:00:00 AM
Lab ID: 1906F76-002
Matrix: TRIP BLANK
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
2-Hexanone	ND	1.5	10		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Isopropylbenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Methylene Chloride	ND	0.15	3.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
n-Butylbenzene	ND	0.23	3.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
n-Propylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Styrene	ND	0.19	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Xylenes, Total	ND	0.45	1.5		µg/L	1	7/8/2019 1:34:00 PM	R6122(
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	7/8/2019 1:34:00 PM	R6122(
Surr: 4-Bromofluorobenzene	99.9	0	70-130		%Rec	1	7/8/2019 1:34:00 PM	R6122(
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	7/8/2019 1:34:00 PM	R6122(
Surr: Toluene-d8	95.6	0	70-130		%Rec	1	7/8/2019 1:34:00 PM	R6122(

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 11:35:00 AM
Lab ID: 1906F76-003
Matrix: AQUEOUS
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	7/2/2019 6:30:41 PM	45939
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	7/2/2019 6:30:41 PM	45939
Surr: DNOP	105	0	70-130		%Rec	1	7/2/2019 6:30:41 PM	45939
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	7/5/2019 1:16:38 PM	G61170
Surr: BFB	115	0	72.8-125		%Rec	1	7/5/2019 1:16:38 PM	G61170
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.80	0.073	0.50		mg/L	5	6/28/2019 11:27:13 AM	R61045
Chloride	330	10	10		mg/L	20	6/28/2019 11:40:06 AM	R61045
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	6/28/2019 11:27:13 AM	R61045
Bromide	0.57	0.089	0.50		mg/L	5	6/28/2019 11:27:13 AM	R61045
Nitrogen, Nitrate (As N)	4.8	0.025	0.50		mg/L	5	6/28/2019 11:27:13 AM	R61045
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	6/28/2019 11:27:13 AM	R61045
Sulfate	600	1.3	10		mg/L	20	6/28/2019 11:40:06 AM	R61045
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.019	0.0025	0.020	J	mg/L	1	6/30/2019 1:25:22 PM	A61067
Barium	0.028	0.00065	0.0020		mg/L	1	6/30/2019 1:25:22 PM	A61067
Beryllium	0.00037	0.00028	0.0020	J	mg/L	1	6/30/2019 1:25:22 PM	A61067
Boron	0.52	0.0045	0.040		mg/L	1	6/30/2019 1:25:22 PM	A61067
Cadmium	ND	0.00055	0.0020		mg/L	1	6/30/2019 1:25:22 PM	A61067
Calcium	180	0.31	5.0		mg/L	5	6/30/2019 1:27:42 PM	A61067
Chromium	ND	0.0015	0.0060		mg/L	1	6/30/2019 1:25:22 PM	A61067
Cobalt	ND	0.0031	0.0060		mg/L	1	6/30/2019 1:25:22 PM	A61067
Copper	ND	0.0013	0.0060		mg/L	1	6/30/2019 1:25:22 PM	A61067
Iron	ND	0.0087	0.020		mg/L	1	6/30/2019 1:25:22 PM	A61067
Magnesium	35	0.050	1.0		mg/L	1	6/30/2019 1:25:22 PM	A61067
Manganese	2.3	0.0014	0.010	*	mg/L	5	6/30/2019 1:27:42 PM	A61067
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/30/2019 1:25:22 PM	A61067
Nickel	0.0063	0.0040	0.010	J	mg/L	1	6/30/2019 1:25:22 PM	A61067
Potassium	0.50	0.16	1.0	J	mg/L	1	6/30/2019 1:25:22 PM	A61067
Silver	0.0027	0.00094	0.0050	J	mg/L	1	6/30/2019 1:25:22 PM	A61067
Sodium	340	2.1	5.0		mg/L	5	6/30/2019 1:27:42 PM	A61067
Zinc	0.079	0.0023	0.010		mg/L	1	6/30/2019 1:25:22 PM	A61067
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	11	0.050	0.40	*	mg/L	20	6/30/2019 11:43:42 AM	45895
Barium	0.29	0.00065	0.0020		mg/L	1	6/30/2019 11:39:39 AM	45895
Beryllium	0.0010	0.00028	0.0020	J	mg/L	1	6/30/2019 11:39:39 AM	45895

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 11:35:00 AM
Lab ID: 1906F76-003
Matrix: AQUEOUS
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.53	0.0045	0.040		mg/L	1	6/30/2019 11:39:39 AM	45895
Cadmium	ND	0.00074	0.0020		mg/L	1	6/30/2019 11:39:39 AM	45895
Chromium	0.0024	0.0015	0.0060	J	mg/L	1	6/30/2019 11:39:39 AM	45895
Cobalt	ND	0.0031	0.0060		mg/L	1	6/30/2019 11:39:39 AM	45895
Copper	ND	0.0041	0.0060		mg/L	1	6/30/2019 11:39:39 AM	45895
Iron	4.1	0.044	0.10	*	mg/L	5	6/30/2019 11:41:42 AM	45895
Manganese	2.5	0.0014	0.010	*	mg/L	5	6/30/2019 11:41:42 AM	45895
Molybdenum	ND	0.0067	0.0080		mg/L	1	6/30/2019 11:39:39 AM	45895
Nickel	0.0099	0.0040	0.010	J	mg/L	1	6/30/2019 11:39:39 AM	45895
Silver	0.0072	0.0014	0.0050		mg/L	1	6/30/2019 11:39:39 AM	45895
Zinc	0.015	0.0058	0.010		mg/L	1	6/30/2019 11:39:39 AM	45895
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	7/2/2019 7:05:08 PM	B61126
Arsenic	0.00050	0.00010	0.0010	J	mg/L	1	6/28/2019 3:18:04 PM	A61054
Lead	ND	0.000055	0.00050		mg/L	1	6/28/2019 3:18:04 PM	A61054
Selenium	0.0022	0.00017	0.0010		mg/L	1	6/28/2019 3:18:04 PM	A61054
Thallium	ND	0.000048	0.00050		mg/L	1	6/28/2019 3:18:04 PM	A61054
Uranium	0.020	0.000075	0.00050		mg/L	1	6/28/2019 3:18:04 PM	A61054
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	7/1/2019 4:16:53 PM	45895
Arsenic	0.0013	0.00031	0.0010		mg/L	1	7/1/2019 4:16:53 PM	45895
Lead	0.0047	0.000055	0.00050		mg/L	1	7/1/2019 4:16:53 PM	45895
Selenium	0.0026	0.00048	0.0010		mg/L	1	7/1/2019 4:16:53 PM	45895
Thallium	ND	0.000052	0.00050		mg/L	1	7/1/2019 4:16:53 PM	45895
Uranium	0.021	0.000085	0.00050		mg/L	1	7/1/2019 4:16:53 PM	45895
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	7/3/2019 4:19:37 PM	46001
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Acenaphthylene	ND	2.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Aniline	ND	3.6	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Anthracene	ND	2.7	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Azobenzene	ND	3.3	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Benz(a)anthracene	ND	3.6	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	7/9/2019 8:38:55 PM	46000

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 11:35:00 AM
Lab ID: 1906F76-003
Matrix: AQUEOUS
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Benzoic acid	ND	11	20		µg/L	1	7/9/2019 8:38:55 PM	46000
Benzyl alcohol	ND	2.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	7/9/2019 8:38:55 PM	46000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Carbazole	ND	2.9	10		µg/L	1	7/9/2019 8:38:55 PM	46000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
4-Chloroaniline	ND	2.3	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2-Chlorophenol	ND	2.7	10		µg/L	1	7/9/2019 8:38:55 PM	46000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Chrysene	ND	2.8	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Dibenzofuran	ND	3.2	10		µg/L	1	7/9/2019 8:38:55 PM	46000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	7/9/2019 8:38:55 PM	46000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	7/9/2019 8:38:55 PM	46000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Diethyl phthalate	ND	2.9	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Dimethyl phthalate	ND	3.2	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	7/9/2019 8:38:55 PM	46000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	7/9/2019 8:38:55 PM	46000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	7/9/2019 8:38:55 PM	46000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Fluoranthene	ND	2.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Fluorene	ND	2.9	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Hexachlorobenzene	ND	3.1	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Hexachloroethane	ND	4.8	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	7/9/2019 8:38:55 PM	46000

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-38
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 11:35:00 AM
Lab ID: 1906F76-003
Matrix: AQUEOUS
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Isophorone	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2-Methylphenol	ND	2.9	10		µg/L	1	7/9/2019 8:38:55 PM	46000
3+4-Methylphenol	ND	3.6	10		µg/L	1	7/9/2019 8:38:55 PM	46000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	7/9/2019 8:38:55 PM	46000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Naphthalene	ND	4.1	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2-Nitroaniline	ND	3.2	10		µg/L	1	7/9/2019 8:38:55 PM	46000
3-Nitroaniline	ND	3.2	10		µg/L	1	7/9/2019 8:38:55 PM	46000
4-Nitroaniline	ND	2.7	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Nitrobenzene	ND	2.8	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2-Nitrophenol	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
4-Nitrophenol	ND	7.6	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Pentachlorophenol	ND	2.7	20		µg/L	1	7/9/2019 8:38:55 PM	46000
Phenanthrene	ND	2.8	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Phenol	ND	8.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Pyrene	ND	2.5	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Pyridine	ND	9.6	10		µg/L	1	7/9/2019 8:38:55 PM	46000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	7/9/2019 8:38:55 PM	46000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	7/9/2019 8:38:55 PM	46000
Surr: 2-Fluorophenol	25.8	0	15-101		%Rec	1	7/9/2019 8:38:55 PM	46000
Surr: Phenol-d5	26.6	0	15-84.6		%Rec	1	7/9/2019 8:38:55 PM	46000
Surr: 2,4,6-Tribromophenol	37.9	0	27.8-112		%Rec	1	7/9/2019 8:38:55 PM	46000
Surr: Nitrobenzene-d5	29.4	0	33-113	S	%Rec	1	7/9/2019 8:38:55 PM	46000
Surr: 2-Fluorobiphenyl	25.3	0	26.6-107	S	%Rec	1	7/9/2019 8:38:55 PM	46000
Surr: 4-Terphenyl-d14	50.0	0	18.7-148		%Rec	1	7/9/2019 8:38:55 PM	46000
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Toluene	ND	0.35	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Ethylbenzene	ND	0.13	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Naphthalene	ND	0.28	2.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2019 2nd QTR GW Samples
Collection Date: 6/27/2019 11:35:00 AM
Lab ID: 1906F76-003
Matrix: AQUEOUS
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Acetone	ND	1.2	10		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Bromobenzene	ND	0.24	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Bromodichloromethane	ND	0.13	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Bromoform	ND	0.29	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Bromomethane	ND	0.27	3.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
2-Butanone	ND	2.1	10		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Carbon disulfide	ND	0.45	10		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Chlorobenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Chloroethane	ND	0.18	2.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Chloroform	1.1	0.12	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Chloromethane	ND	0.32	3.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Dibromochloromethane	ND	0.24	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Dibromomethane	ND	0.21	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
2-Hexanone	ND	1.5	10		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Isopropylbenzene	ND	0.19	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/8/2019 1:58:00 PM	R6122C
Methylene Chloride	ND	0.15	3.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
n-Butylbenzene	ND	0.23	3.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C
n-Propylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122C

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Matrix: AQUEOUS
Received Date: 6/27/2019 4:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
Styrene	ND	0.19	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
Tetrachloroethene (PCE)	0.79	0.15	1.0	J	µg/L	1	7/8/2019 1:58:00 PM	R6122(
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/8/2019 1:58:00 PM	R6122(
Xylenes, Total	ND	0.45	1.5		µg/L	1	7/8/2019 1:58:00 PM	R6122(
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	1	7/8/2019 1:58:00 PM	R6122(
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	7/8/2019 1:58:00 PM	R6122(
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	7/8/2019 1:58:00 PM	R6122(
Surr: Toluene-d8	95.4	0	70-130		%Rec	1	7/8/2019 1:58:00 PM	R6122(

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A61067** RunNo: **61067**
Prep Date: Analysis Date: **6/30/2019** SeqNo: **2068081** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0029	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **A61067** RunNo: **61067**
Prep Date: Analysis Date: **6/30/2019** SeqNo: **2068082** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0083	0.020	0.01000	0	82.6	50	150			J
Barium	0.0020	0.0020	0.002000	0	102	50	150			
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			
Boron	0.038	0.040	0.04000	0	93.9	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	92.3	50	150			J
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0051	0.0060	0.006000	0	84.4	50	150			J
Cobalt	0.0047	0.0060	0.006000	0	78.1	50	150			J
Iron	0.019	0.020	0.02000	0	92.6	50	150			J
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0019	0.0020	0.002000	0	97.1	50	150			J
Molybdenum	0.0077	0.0080	0.008000	0	96.5	50	150			J
Nickel	0.0054	0.010	0.005000	0	108	50	150			J
Potassium	0.47	1.0	0.5000	0	94.7	50	150			J
Silver	0.0042	0.0050	0.005000	0	83.7	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068082** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.58	1.0	0.5000	0	117	50	150			J
Zinc	0.0097	0.010	0.01000	0	97.4	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068083** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Barium	0.47	0.0020	0.5000	0	93.5	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.5	85	115			
Boron	0.49	0.040	0.5000	0	98.2	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.2	85	115			
Calcium	49	1.0	50.00	0	98.1	85	115			
Chromium	0.47	0.0060	0.5000	0	94.6	85	115			
Cobalt	0.46	0.0060	0.5000	0	91.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.49	0.020	0.5000	0	97.9	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.47	0.0020	0.5000	0	94.6	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.7	85	115			
Nickel	0.47	0.010	0.5000	0	93.2	85	115			
Potassium	49	1.0	50.00	0	98.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.46	0.010	0.5000	0	92.3	85	115			

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068084** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0031	0.0060	0.006000	0	51.7	50	150			J

Sample ID: **MB-45895**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45895**	RunNo: **61067**
Prep Date: **6/28/2019**	Analysis Date: **6/30/2019**	SeqNo: **2068091** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-45895** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **45895** RunNo: **61067**
Prep Date: **6/28/2019** Analysis Date: **6/30/2019** SeqNo: **2068091** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	0.018	0.020								J
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-45895** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **45895** RunNo: **61067**
Prep Date: **6/28/2019** Analysis Date: **6/30/2019** SeqNo: **2068092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0097	0.020	0.01000	0	97.1	50	150			J
Barium	0.0021	0.0020	0.002000	0	104	50	150			
Beryllium	0.0022	0.0020	0.002000	0	110	50	150			
Cadmium	0.0022	0.0020	0.002000	0	109	50	150			
Chromium	0.0054	0.0060	0.006000	0	90.0	50	150			J
Cobalt	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0037	0.0060	0.006000	0	62.0	50	150			J
Iron	0.019	0.020	0.02000	0	95.0	50	150			J
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Molybdenum	0.0083	0.0080	0.008000	0	103	50	150			
Nickel	0.0048	0.010	0.005000	0	96.5	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.7	50	150			J
Zinc	0.012	0.010	0.01000	0	120	50	150			

Sample ID: **LCS-45895** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **45895** RunNo: **61067**
Prep Date: **6/28/2019** Analysis Date: **6/30/2019** SeqNo: **2068093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	113	85	115			
Barium	0.48	0.0020	0.5000	0	95.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **LCS-45895**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **45895**	RunNo: **61067**
Prep Date: **6/28/2019**	Analysis Date: **6/30/2019**	SeqNo: **2068093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.49	0.0020	0.5000	0	98.1	85	115			
Boron	0.54	0.040	0.5000	0	109	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	96.1	85	115			
Cobalt	0.46	0.0060	0.5000	0	91.8	85	115			
Copper	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Manganese	0.48	0.0020	0.5000	0	96.0	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.0	85	115			
Nickel	0.47	0.010	0.5000	0	94.2	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.47	0.010	0.5000	0	93.9	85	115			

Sample ID: **LLLCS-45895**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **45895**	RunNo: **61067**
Prep Date: **6/28/2019**	Analysis Date: **6/30/2019**	SeqNo: **2068097** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.087	0.040	0.04000	0	217	50	150			S

Sample ID: **MB-45895**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **45895**	RunNo: **61090**
Prep Date: **6/28/2019**	Analysis Date: **7/1/2019**	SeqNo: **2069608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	0.019	0.020								J
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-45895** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **45895** RunNo: **61090**

Prep Date: **6/28/2019** Analysis Date: **7/1/2019** SeqNo: **2069609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	123	50	150			J
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Beryllium	0.0020	0.0020	0.002000	0	102	50	150			
Cadmium	0.0021	0.0020	0.002000	0	104	50	150			
Chromium	0.0060	0.0060	0.006000	0	99.8	50	150			J
Cobalt	0.0071	0.0060	0.006000	0	118	50	150			
Copper	0.0072	0.0060	0.006000	0	120	50	150			
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0022	0.0020	0.002000	0	109	50	150			
Molybdenum	0.0069	0.0080	0.008000	0	86.4	50	150			J
Nickel	0.0043	0.010	0.005000	0	86.2	50	150			J
Silver	0.0053	0.0050	0.005000	0	107	50	150			
Zinc	0.014	0.010	0.01000	0	136	50	150			

Sample ID: **LCS-45895** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **45895** RunNo: **61090**

Prep Date: **6/28/2019** Analysis Date: **7/1/2019** SeqNo: **2069610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	112	85	115			
Barium	0.49	0.0020	0.5000	0	98.5	85	115			
Beryllium	0.51	0.0020	0.5000	0	103	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Cobalt	0.50	0.0060	0.5000	0	99.5	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Molybdenum	0.51	0.0080	0.5000	0	101	85	115			
Nickel	0.49	0.010	0.5000	0	98.3	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.51	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068043** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0029	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068044** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0083	0.020	0.01000	0	82.6	50	150			J
Barium	0.0020	0.0020	0.002000	0	102	50	150			
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			
Boron	0.038	0.040	0.04000	0	93.9	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	92.3	50	150			J
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0051	0.0060	0.006000	0	84.4	50	150			J
Cobalt	0.0047	0.0060	0.006000	0	78.1	50	150			J
Iron	0.019	0.020	0.02000	0	92.6	50	150			J
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0019	0.0020	0.002000	0	97.1	50	150			J
Molybdenum	0.0077	0.0080	0.008000	0	96.5	50	150			J
Nickel	0.0054	0.010	0.005000	0	108	50	150			J
Potassium	0.47	1.0	0.5000	0	94.7	50	150			J
Silver	0.0042	0.0050	0.005000	0	83.7	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068044** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.58	1.0	0.5000	0	117	50	150			J
Zinc	0.0097	0.010	0.01000	0	97.4	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068045** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Barium	0.47	0.0020	0.5000	0	93.5	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.5	85	115			
Boron	0.49	0.040	0.5000	0	98.2	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.2	85	115			
Calcium	49	1.0	50.00	0	98.1	85	115			
Chromium	0.47	0.0060	0.5000	0	94.6	85	115			
Cobalt	0.46	0.0060	0.5000	0	91.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.49	0.020	0.5000	0	97.9	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.47	0.0020	0.5000	0	94.6	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.7	85	115			
Nickel	0.47	0.010	0.5000	0	93.2	85	115			
Potassium	49	1.0	50.00	0	98.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.46	0.010	0.5000	0	92.3	85	115			

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A61067**	RunNo: **61067**
Prep Date:	Analysis Date: **6/30/2019**	SeqNo: **2068046** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0031	0.0060	0.006000	0	51.7	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **MB-45895**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **45895**	RunNo: **61085**
Prep Date: **6/28/2019**	Analysis Date: **7/1/2019**	SeqNo: **2069622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLCS-45895**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **45895**	RunNo: **61085**
Prep Date: **6/28/2019**	Analysis Date: **7/1/2019**	SeqNo: **2069631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.7	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.4	85	115			
Lead	0.012	0.00050	0.01250	0	97.8	85	115			
Selenium	0.027	0.0010	0.02500	0	106	85	115			
Thallium	0.012	0.00050	0.01250	0	96.6	85	115			
Uranium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID: **MSLLLCS-45895**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **45895**	RunNo: **61085**
Prep Date: **6/28/2019**	Analysis Date: **7/1/2019**	SeqNo: **2069638** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	104	50	150			
Arsenic	0.00090	0.0010	0.001000	0	89.8	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.5	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.0	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	94.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.1	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A61054**	RunNo: **61054**
Prep Date:	Analysis Date: **6/28/2019**	SeqNo: **2067555** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A61054**	RunNo: **61054**
Prep Date:	Analysis Date: **6/28/2019**	SeqNo: **2067556** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00089	0.0010	0.001000	0	88.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.2	50	150			J
Selenium	0.00094	0.0010	0.001000	0	94.2	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	94.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A61054**	RunNo: **61054**
Prep Date:	Analysis Date: **6/28/2019**	SeqNo: **2067557** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.2	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Selenium	0.024	0.0010	0.02500	0	97.3	85	115			
Thallium	0.012	0.00050	0.01250	0	97.2	85	115			
Uranium	0.012	0.00050	0.01250	0	96.4	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B61126**	RunNo: **61126**
Prep Date:	Analysis Date: **7/2/2019**	SeqNo: **2071293** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B61126**	RunNo: **61126**
Prep Date:	Analysis Date: **7/2/2019**	SeqNo: **2071294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MSLLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B61126**	RunNo: **61126**
Prep Date:	Analysis Date: **7/2/2019**	SeqNo: **2071294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00070	0.0010	0.001000	0	70.3	50	150			J

Sample ID: **MSLCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B61126**	RunNo: **61126**
Prep Date:	Analysis Date: **7/2/2019**	SeqNo: **2071295** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB-46001**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **PBW**	Batch ID: **46001**	RunNo: **61142**							
Prep Date: **7/3/2019**	Analysis Date: **7/3/2019**	SeqNo: **2071792**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-46001**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **LCSW**	Batch ID: **46001**	RunNo: **61142**							
Prep Date: **7/3/2019**	Analysis Date: **7/3/2019**	SeqNo: **2071793**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R61045**	RunNo: **61045**							
Prep Date:	Analysis Date: **6/28/2019**	SeqNo: **2066960**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R61045**	RunNo: **61045**							
Prep Date:	Analysis Date: **6/28/2019**	SeqNo: **2066961**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	105	90	110			
Chloride	4.9	0.50	5.000	0	97.4	90	110			
Nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	91.1	90	110			
Bromide	2.4	0.10	2.500	0	97.8	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.5	90	110			
Sulfate	10	0.50	10.00	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **LCS-45939**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **45939**	RunNo: **61083**
Prep Date: **7/2/2019**	Analysis Date: **7/2/2019**	SeqNo: **2070254** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	90.1	71.8	135			
Surr: DNOP	0.44		0.5000		88.6	70	130			

Sample ID: **MB-45939**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **45939**	RunNo: **61083**
Prep Date: **7/2/2019**	Analysis Date: **7/2/2019**	SeqNo: **2070255** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.95		1.000		94.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G61170**	RunNo: **61170**
Prep Date:	Analysis Date: **7/5/2019**	SeqNo: **2073567** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.4	72.8	125			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G61170**	RunNo: **61170**
Prep Date:	Analysis Date: **7/5/2019**	SeqNo: **2073568** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.43	0.050	0.5000	0	86.4	77.7	130			
Surr: BFB	21		20.00		105	72.8	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R61220** RunNo: **61220**
Prep Date: Analysis Date: **7/8/2019** SeqNo: **2075386** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.1	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	97.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.7		10.00		96.9	70	130			

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R61220** RunNo: **61220**
Prep Date: Analysis Date: **7/8/2019** SeqNo: **2075524** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R61220**	RunNo: **61220**
Prep Date:	Analysis Date: **7/8/2019**	SeqNo: **2075524** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.48	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PBW** Batch ID: **R61220** RunNo: **61220**

Prep Date: Analysis Date: **7/8/2019** SeqNo: **2075524** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID: **1906f76-003ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-38** Batch ID: **R61220** RunNo: **61220**

Prep Date: Analysis Date: **7/8/2019** SeqNo: **2075545** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	20	1.0	20.00	0	98.0	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.8	67.6	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.5		10.00		95.1	70	130			

Sample ID: **1906f76-003amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-38** Batch ID: **R61220** RunNo: **61220**

Prep Date: Analysis Date: **7/8/2019** SeqNo: **2075548** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130	4.24	20	
Toluene	19	1.0	20.00	0	92.8	70	130	5.39	20	
Chlorobenzene	19	1.0	20.00	0	95.0	70	130	5.53	20	
1,1-Dichloroethene	19	1.0	20.00	0	94.4	67.6	130	5.53	20	
Trichloroethene (TCE)	20	1.0	20.00	0	99.3	70	130	4.74	20	
Surr: 1,2-Dichloroethane-d4	12		10.00		116	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		111	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		95.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **mb-46000** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **46000** RunNo: **61260**
Prep Date: **7/3/2019** Analysis Date: **7/9/2019** SeqNo: **2076703** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	4.0	10								J
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **mb-46000**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46000**	RunNo: **61260**
Prep Date: **7/3/2019**	Analysis Date: **7/9/2019**	SeqNo: **2076703** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	95		200.0		47.4	15	101			
Surr: Phenol-d5	79		200.0		39.6	15	84.6			
Surr: 2,4,6-Tribromophenol	130		200.0		66.1	27.8	112			
Surr: Nitrobenzene-d5	70		100.0		69.5	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		59.7	26.6	107			
Surr: 4-Terphenyl-d14	65		100.0		64.9	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**

16-Jul-19

Client: MARATHON GALLUP

Project: 2019 2nd QTR GW Samples

Sample ID: **lcs-46000**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **46000**	RunNo: **61260**
Prep Date: **7/3/2019**	Analysis Date: **7/9/2019**	SeqNo: **2076704** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	80.5	32.2	94			
4-Chloro-3-methylphenol	70	10	100.0	0	70.2	37.7	101			
2-Chlorophenol	75	10	100.0	0	75.2	32.6	90.1			
1,4-Dichlorobenzene	43	10	100.0	0	42.8	30	87.2			
2,4-Dinitrotoluene	65	10	100.0	0	64.5	35.9	85.8			
N-Nitrosodi-n-propylamine	67	10	100.0	0	67.4	37.1	108			
4-Nitrophenol	36	10	100.0	0	36.1	22.4	86.6			
Pentachlorophenol	53	20	100.0	0	53.0	31.6	91			
Phenol	43	10	100.0	0	42.8	21.7	84.9			
Pyrene	79	10	100.0	0	78.9	46.3	103			
1,2,4-Trichlorobenzene	57	10	100.0	0	57.5	30.2	88.3			
Surr: 2-Fluorophenol	160		300.0		54.7	15	101			
Surr: Phenol-d5	130		300.0		41.9	15	84.6			
Surr: 2,4,6-Tribromophenol	200		300.0		67.7	27.8	112			
Surr: Nitrobenzene-d5	170		200.0		85.9	33	113			
Surr: 2-Fluorobiphenyl	140		200.0		71.6	26.6	107			
Surr: 4-Terphenyl-d14	140		200.0		68.8	18.7	148			

Sample ID: **lcsd-46000**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46000**	RunNo: **61260**
Prep Date: **7/3/2019**	Analysis Date: **7/9/2019**	SeqNo: **2076705** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	55	10	100.0	0	55.0	32.2	102	37.5	32.9	R
4-Chloro-3-methylphenol	61	10	100.0	0	61.0	37.7	111	14.1	29.9	
2-Chlorophenol	58	10	100.0	0	58.2	32.6	102	25.4	28.5	
1,4-Dichlorobenzene	27	10	100.0	0	27.1	15	93.4	44.8	44.9	
2,4-Dinitrotoluene	58	10	100.0	0	57.6	35.9	93.4	11.3	28.5	
N-Nitrosodi-n-propylamine	60	10	100.0	0	60.0	37.1	112	11.6	29.9	
4-Nitrophenol	36	10	100.0	0	36.4	15	86.6	0.828	68	
Pentachlorophenol	54	20	100.0	0	54.2	31.6	91	2.35	39.5	
Phenol	34	10	100.0	0	34.0	15	84.9	23.0	44.2	
Pyrene	77	10	100.0	0	76.7	46.3	103	2.85	23.8	
1,2,4-Trichlorobenzene	31	10	100.0	0	30.9	15.7	103	60.2	38	R
Surr: 2-Fluorophenol	120		300.0		38.6	15	101	0	0	
Surr: Phenol-d5	95		300.0		31.7	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	190		300.0		63.9	27.8	112	0	0	
Surr: Nitrobenzene-d5	120		200.0		58.2	33	113	0	0	
Surr: 2-Fluorobiphenyl	99		200.0		49.5	26.6	107	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F76**
16-Jul-19

Client: MARATHON GALLUP
Project: 2019 2nd QTR GW Samples

Sample ID: **lcsd-46000**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**						
Client ID: **LCSS02**	Batch ID: **46000**	RunNo: **61260**						
Prep Date: **7/3/2019**	Analysis Date: **7/9/2019**	SeqNo: **2076705**	Units: **µg/L**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	140		200.0		69.2	18.7	148	0	0	

Sample ID: **lcs-46115**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**						
Client ID: **LCSW**	Batch ID: **46115**	RunNo: **61367**						
Prep Date: **7/11/2019**	Analysis Date: **7/13/2019**	SeqNo: **2079989**	Units: **%Rec**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		56.6	15	101			
Surr: Phenol-d5	110		200.0		53.2	15	84.6			
Surr: 2,4,6-Tribromophenol	130		200.0		65.1	27.8	112			
Surr: Nitrobenzene-d5	74		100.0		73.7	33	113			
Surr: 2-Fluorobiphenyl	64		100.0		64.3	26.6	107			
Surr: 4-Terphenyl-d14	76		100.0		76.1	18.7	148			

Sample ID: **lcsd-46115**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**						
Client ID: **LCSS02**	Batch ID: **46115**	RunNo: **61367**						
Prep Date: **7/11/2019**	Analysis Date: **7/13/2019**	SeqNo: **2079990**	Units: **%Rec**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		55.2	15	101	0	0	
Surr: Phenol-d5	94		200.0		46.8	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		82.7	27.8	112	0	0	
Surr: Nitrobenzene-d5	75		100.0		75.4	33	113	0	0	
Surr: 2-Fluorobiphenyl	71		100.0		70.9	26.6	107	0	0	
Surr: 4-Terphenyl-d14	85		100.0		84.6	18.7	148	0	0	

Sample ID: **mb-46115**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**						
Client ID: **PBW**	Batch ID: **46115**	RunNo: **61367**						
Prep Date: **7/11/2019**	Analysis Date: **7/13/2019**	SeqNo: **2079991**	Units: **%Rec**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	63		200.0		31.7	15	101			
Surr: Phenol-d5	44		200.0		21.9	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		60.8	27.8	112			
Surr: Nitrobenzene-d5	52		100.0		52.4	33	113			
Surr: 2-Fluorobiphenyl	50		100.0		50.3	26.6	107			
Surr: 4-Terphenyl-d14	63		100.0		62.8	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1906F76** RcptNo: **1**

Received By: **Andy Freeman** **6/27/2019 4:20:00 PM**

Completed By: **Erin Melendrez** **6/27/2019 4:29:49 PM**

Reviewed By: (unpres.) DAD 6/27/19 YC 6/28/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3

(<2 or >12 unless noted)

Adjusted? NO

Checked by: TO 6/28/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Yes			
2	4.9	Good	Yes			
3	5.1	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - WESTERN REFINING SW

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:
☐ Standard X Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush

Project Name:
2019 2ND QTR GW SAMPLES

Project #:
MKTF-38 - RESAMPLED FOR VERIFICATION

Project Manager:
Brian Moore

Sampler: C. JOHNSON (CAJohnson1@marathonpetroleum.com)

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.6, 4.9, 5.1 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1906F76	Analysis Request: 8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	CATIONS/ANIONS	8011 FOR EDB	8021B (BTEX)	BOD	COD	TDS	TSS			Air Bubbles (Y or N)
6/27/2019	800	aqueous	FIELD BLANK	3-40ML VOAS	HCL	-001	X														
6/28/2019	800	aqueous	TRIP BLANK	3-40ML VOAS	HCL	-002	X														
6/27/2019	1135	aqueous	MKTF-38	Misc	Misc	-003	X	X	X	X	2	X									

Date	Time	Relinquished by:	Received by:	Date	Time
6/27/19	1400			6/27/19	1401
6/27/19	1619			6/27/19	1620

Remarks: ORIGINAL SAMPLE COLLECTED ON 5/14/19 WAS MISLABELED AS MKTF-37. RESAMPLED TO CONFIRM.

3 coolers

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 26, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 Annual 3rd QTR GW Sampling OrderNo.: 1908756

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 11 sample(s) on 8/13/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 7:00:00 AM
Lab ID: 1908756-001 **Matrix:** AQUEOUS **Received Date:** 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 1:14:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 1:14:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 1:14:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 1:14:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 7:00:00 AM
Lab ID: 1908756-001 **Matrix:** AQUEOUS **Received Date:** 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 1:14:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 1:14:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 1:14:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 1:14:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	98.8	0	70-130		%Rec	1	8/19/2019 1:14:00 PM	R62227
Surr: 4-Bromofluorobenzene	97.1	0	70-130		%Rec	1	8/19/2019 1:14:00 PM	R62227
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	1	8/19/2019 1:14:00 PM	R62227
Surr: Toluene-d8	98.1	0	70-130		%Rec	1	8/19/2019 1:14:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 7:00:00 AM
Lab ID: 1908756-002
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Toluene	0.45	0.35	1.0	J	µg/L	1	8/19/2019 1:38:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 1:38:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 1:38:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 1:38:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Chlorobenzene	0.57	0.19	1.0	J	µg/L	1	8/19/2019 1:38:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 1:38:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 7:00:00 AM
Lab ID: 1908756-002 **Matrix:** AQUEOUS **Received Date:** 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 1:38:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 1:38:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 1:38:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 1:38:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/19/2019 1:38:00 PM	R62227
Surr: 4-Bromofluorobenzene	98.0	0	70-130		%Rec	1	8/19/2019 1:38:00 PM	R62227
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	1	8/19/2019 1:38:00 PM	R62227
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	8/19/2019 1:38:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 9:50:00 AM
Lab ID: 1908756-003
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/16/2019 12:55:05 AM	46813
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/16/2019 5:32:39 PM	46825
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/16/2019 5:32:39 PM	46825
Surr: DNOP	103	0	70-130		%Rec	1	8/16/2019 5:32:39 PM	46825
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	3.1	0.11	0.25		mg/L	5	8/14/2019 12:51:54 PM	G62142
Surr: BFB	108	0	65.8-143		%Rec	5	8/14/2019 12:51:54 PM	G62142
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/3/2019 4:08:52 PM	A62619
Barium	0.071	0.00065	0.0020		mg/L	1	9/3/2019 4:08:52 PM	A62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 4:08:52 PM	A62619
Boron	0.53	0.0045	0.040		mg/L	1	9/3/2019 4:08:52 PM	A62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 4:08:52 PM	A62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 4:08:52 PM	A62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 4:08:52 PM	A62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 4:08:52 PM	A62619
Iron	0.18	0.0087	0.020		mg/L	1	9/3/2019 4:08:52 PM	A62619
Manganese	0.29	0.00029	0.0020	*	mg/L	1	9/3/2019 4:08:52 PM	A62619
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/3/2019 4:08:52 PM	A62619
Nickel	0.020	0.0040	0.010		mg/L	1	9/3/2019 4:08:52 PM	A62619
Silver	0.00097	0.00094	0.0050	J	mg/L	1	9/3/2019 4:08:52 PM	A62619
Zinc	0.0036	0.0023	0.010	J	mg/L	1	9/3/2019 4:08:52 PM	A62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.067	0.0025	0.020		mg/L	1	8/22/2019 8:04:35 PM	46990
Barium	0.071	0.00065	0.0020		mg/L	1	8/22/2019 8:04:35 PM	46990
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 8:04:35 PM	46990
Boron	0.52	0.0045	0.040		mg/L	1	8/22/2019 8:04:35 PM	46990
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 8:04:35 PM	46990
Chromium	ND	0.0015	0.0060		mg/L	1	8/22/2019 8:04:35 PM	46990
Cobalt	ND	0.0031	0.0060		mg/L	1	8/22/2019 8:04:35 PM	46990
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 8:04:35 PM	46990
Iron	0.22	0.0087	0.020		mg/L	1	8/22/2019 8:04:35 PM	46990
Manganese	0.29	0.00029	0.0020	*	mg/L	1	8/22/2019 8:04:35 PM	46990
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/22/2019 8:04:35 PM	46990
Nickel	0.022	0.0040	0.010		mg/L	1	8/22/2019 8:04:35 PM	46990
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 8:04:35 PM	46990

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 9:50:00 AM
Lab ID: 1908756-003
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	0.010	0.0058	0.010	J	mg/L	1	8/22/2019 8:04:35 PM	46990
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 8:56:49 PM	B62319
Arsenic	0.00069	0.00010	0.0010	J	mg/L	1	8/21/2019 8:56:49 PM	B62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 8:56:49 PM	B62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 8:56:49 PM	B62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 8:56:49 PM	B62319
Uranium	0.053	0.00037	0.0025	*	mg/L	5	8/30/2019 1:53:09 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 5:55:12 PM	46990
Arsenic	0.00087	0.00031	0.0010	J	mg/L	1	8/22/2019 5:55:12 PM	46990
Lead	ND	0.000055	0.00050		mg/L	1	8/22/2019 5:55:12 PM	46990
Selenium	ND	0.00048	0.0010		mg/L	1	8/22/2019 5:55:12 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 5:55:12 PM	46990
Uranium	0.049	0.00042	0.0025	*	mg/L	5	8/23/2019 3:20:20 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	8/15/2019 6:50:17 PM	46818
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.83	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Toluene	ND	1.8	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Ethylbenzene	ND	0.66	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Methyl tert-butyl ether (MTBE)	3800	23	50		µg/L	50	8/19/2019 2:02:00 PM	R62227
1,2,4-Trimethylbenzene	ND	1.1	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Naphthalene	ND	1.4	10		µg/L	5	8/19/2019 2:27:00 PM	R62227
1-Methylnaphthalene	ND	1.6	20		µg/L	5	8/19/2019 2:27:00 PM	R62227
2-Methylnaphthalene	ND	1.7	20		µg/L	5	8/19/2019 2:27:00 PM	R62227
Acetone	ND	6.0	50		µg/L	5	8/19/2019 2:27:00 PM	R62227
Bromobenzene	ND	1.2	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Bromodichloromethane	ND	0.67	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Bromoform	ND	1.4	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Bromomethane	ND	1.4	15		µg/L	5	8/19/2019 2:27:00 PM	R62227
2-Butanone	ND	10	50		µg/L	5	8/19/2019 2:27:00 PM	R62227
Carbon disulfide	ND	2.3	50		µg/L	5	8/19/2019 2:27:00 PM	R62227
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227

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Hall Environmental Analysis Laboratory, Inc.

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Collection Date: 8/12/2019 9:50:00 AM
Lab ID: 1908756-003
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Chlorobenzene	ND	0.97	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Chloroethane	ND	0.89	10		µg/L	5	8/19/2019 2:27:00 PM	R62227
Chloroform	ND	0.61	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Chloromethane	ND	1.6	15		µg/L	5	8/19/2019 2:27:00 PM	R62227
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	8/19/2019 2:27:00 PM	R62227
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Dibromomethane	ND	1.0	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
2,2-Dichloropropane	ND	1.2	10		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
2-Hexanone	ND	7.7	50		µg/L	5	8/19/2019 2:27:00 PM	R62227
Isopropylbenzene	ND	0.96	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	8/19/2019 2:27:00 PM	R62227
Methylene Chloride	ND	0.77	15		µg/L	5	8/19/2019 2:27:00 PM	R62227
n-Butylbenzene	ND	1.1	15		µg/L	5	8/19/2019 2:27:00 PM	R62227
n-Propylbenzene	ND	1.1	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
sec-Butylbenzene	ND	1.2	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Styrene	ND	0.96	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	8/19/2019 2:27:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-29
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 9:50:00 AM
Lab ID: 1908756-003
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	8/19/2019 2:27:00 PM	R62227
Vinyl chloride	ND	0.90	5.0		µg/L	5	8/19/2019 2:27:00 PM	R62227
Xylenes, Total	ND	2.3	7.5		µg/L	5	8/19/2019 2:27:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	5	8/19/2019 2:27:00 PM	R62227
Surr: 4-Bromofluorobenzene	97.3	0	70-130		%Rec	5	8/19/2019 2:27:00 PM	R62227
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	5	8/19/2019 2:27:00 PM	R62227
Surr: Toluene-d8	101	0	70-130		%Rec	5	8/19/2019 2:27:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-004
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/16/2019 1:10:37 AM	46813
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/16/2019 6:45:44 PM	46825
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/16/2019 6:45:44 PM	46825
Surr: DNOP	103	0	70-130		%Rec	1	8/16/2019 6:45:44 PM	46825
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.061	0.021	0.050		mg/L	1	8/14/2019 2:02:31 PM	G62142
Surr: BFB	116	0	65.8-143		%Rec	1	8/14/2019 2:02:31 PM	G62142
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/3/2019 4:11:01 PM	A62619
Barium	0.018	0.00065	0.0020		mg/L	1	9/3/2019 4:11:01 PM	A62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 4:11:01 PM	A62619
Boron	0.33	0.0045	0.040		mg/L	1	9/3/2019 4:11:01 PM	A62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 4:11:01 PM	A62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 4:11:01 PM	A62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 4:11:01 PM	A62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 4:11:01 PM	A62619
Iron	ND	0.0087	0.020		mg/L	1	9/3/2019 4:11:01 PM	A62619
Manganese	0.017	0.00029	0.0020		mg/L	1	9/3/2019 4:11:01 PM	A62619
Molybdenum	0.011	0.0067	0.0080		mg/L	1	9/3/2019 4:11:01 PM	A62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 4:11:01 PM	A62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 4:11:01 PM	A62619
Zinc	0.0068	0.0023	0.010	J	mg/L	1	9/3/2019 4:11:01 PM	A62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	8/26/2019 2:24:17 PM	A62442
Barium	0.018	0.00065	0.0020		mg/L	1	8/26/2019 2:24:17 PM	A62442
Beryllium	ND	0.00028	0.0020		mg/L	1	8/26/2019 2:24:17 PM	A62442
Boron	0.32	0.0045	0.040		mg/L	1	8/26/2019 2:24:17 PM	A62442
Cadmium	ND	0.00074	0.0020		mg/L	1	8/26/2019 2:24:17 PM	A62442
Chromium	ND	0.0015	0.0060		mg/L	1	8/26/2019 2:24:17 PM	A62442
Cobalt	ND	0.0031	0.0060		mg/L	1	8/26/2019 2:24:17 PM	A62442
Copper	ND	0.0041	0.0060		mg/L	1	8/26/2019 2:24:17 PM	A62442
Iron	ND	0.0087	0.020		mg/L	1	8/26/2019 2:24:17 PM	A62442
Manganese	0.017	0.00029	0.0020		mg/L	1	8/26/2019 2:24:17 PM	A62442
Molybdenum	0.0081	0.0067	0.0080		mg/L	1	8/26/2019 2:24:17 PM	A62442
Nickel	ND	0.0040	0.010		mg/L	1	8/26/2019 2:24:17 PM	A62442
Silver	ND	0.0014	0.0050		mg/L	1	8/26/2019 2:24:17 PM	A62442

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-004
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	8/26/2019 2:24:17 PM	A62442
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 9:10:23 PM	B62319
Arsenic	0.00076	0.00010	0.0010	J	mg/L	1	8/21/2019 9:10:23 PM	B62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 9:10:23 PM	B62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 9:10:23 PM	B62319
Thallium	0.000050	0.000048	0.00050	J	mg/L	1	8/21/2019 9:10:23 PM	B62319
Uranium	0.015	0.000075	0.00050		mg/L	1	8/21/2019 9:10:23 PM	B62319
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/28/2019 7:49:01 PM	C62501
Arsenic	0.00079	0.00031	0.0010	J	mg/L	1	8/28/2019 7:49:01 PM	C62501
Lead	ND	0.000055	0.00050		mg/L	1	8/28/2019 7:49:01 PM	C62501
Selenium	ND	0.00048	0.0010		mg/L	1	8/28/2019 7:49:01 PM	C62501
Thallium	ND	0.000052	0.00050		mg/L	1	8/28/2019 7:49:01 PM	C62501
Uranium	0.015	0.000085	0.00050		mg/L	1	8/28/2019 7:49:01 PM	C62501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	8/15/2019 6:52:28 PM	46818
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Methyl tert-butyl ether (MTBE)	94	0.46	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2-Dichloroethane (EDC)	0.91	0.19	1.0	J	µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 3:40:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 3:40:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 3:40:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-004
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 3:40:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 3:40:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-13
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-004 **Matrix:** AQUEOUS **Received Date:** 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 3:40:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 3:40:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/19/2019 3:40:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.9	0	70-130		%Rec	1	8/19/2019 3:40:00 PM	R62227
Surr: Dibromofluoromethane	96.9	0	70-130		%Rec	1	8/19/2019 3:40:00 PM	R62227
Surr: Toluene-d8	99.7	0	70-130		%Rec	1	8/19/2019 3:40:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-005
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	8/16/2019 1:26:06 AM	46813
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/16/2019 7:10:03 PM	46825
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/16/2019 7:10:03 PM	46825
Surr: DNOP	108	0	70-130		%Rec	1	8/16/2019 7:10:03 PM	46825
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.064	0.021	0.050		mg/L	1	8/14/2019 2:26:08 PM	G62142
Surr: BFB	115	0	65.8-143		%Rec	1	8/14/2019 2:26:08 PM	G62142
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/3/2019 4:13:06 PM	A62619
Barium	0.019	0.00065	0.0020		mg/L	1	9/3/2019 4:13:06 PM	A62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 4:13:06 PM	A62619
Boron	0.33	0.0045	0.040		mg/L	1	9/3/2019 4:13:06 PM	A62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 4:13:06 PM	A62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 4:13:06 PM	A62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 4:13:06 PM	A62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 4:13:06 PM	A62619
Iron	ND	0.0087	0.020		mg/L	1	9/3/2019 4:13:06 PM	A62619
Manganese	0.018	0.00029	0.0020		mg/L	1	9/3/2019 4:13:06 PM	A62619
Molybdenum	0.010	0.0067	0.0080		mg/L	1	9/3/2019 4:13:06 PM	A62619
Nickel	0.0087	0.0040	0.010	J	mg/L	1	9/3/2019 4:13:06 PM	A62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 4:13:06 PM	A62619
Zinc	0.0074	0.0023	0.010	J	mg/L	1	9/3/2019 4:13:06 PM	A62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	8/28/2019 1:01:52 PM	46990
Barium	0.019	0.00065	0.0020		mg/L	1	8/28/2019 1:01:52 PM	46990
Beryllium	ND	0.00028	0.0020		mg/L	1	8/28/2019 1:01:52 PM	46990
Boron	0.33	0.0045	0.040		mg/L	1	8/28/2019 1:01:52 PM	46990
Cadmium	ND	0.00074	0.0020		mg/L	1	8/28/2019 1:01:52 PM	46990
Chromium	ND	0.0015	0.0060		mg/L	1	8/28/2019 1:01:52 PM	46990
Cobalt	ND	0.0031	0.0060		mg/L	1	8/28/2019 1:01:52 PM	46990
Copper	ND	0.0041	0.0060		mg/L	1	8/28/2019 1:01:52 PM	46990
Iron	0.0089	0.0087	0.020	J	mg/L	1	8/28/2019 1:01:52 PM	46990
Manganese	0.018	0.00029	0.0020		mg/L	1	8/28/2019 1:01:52 PM	46990
Molybdenum	0.011	0.0067	0.0080		mg/L	1	8/28/2019 1:01:52 PM	46990
Nickel	0.011	0.0040	0.010		mg/L	1	8/28/2019 1:01:52 PM	46990
Silver	0.0054	0.0014	0.0050		mg/L	1	8/28/2019 1:01:52 PM	46990

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-005
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Zinc	ND	0.0058	0.010		mg/L	1	8/28/2019 1:01:52 PM	46990
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 9:13:06 PM	B62319
Arsenic	0.00079	0.00010	0.0010	J	mg/L	1	8/21/2019 9:13:06 PM	B62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 9:13:06 PM	B62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 9:13:06 PM	B62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 9:13:06 PM	B62319
Uranium	0.015	0.000075	0.00050		mg/L	1	8/21/2019 9:13:06 PM	B62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 5:59:35 PM	46990
Arsenic	0.00088	0.00031	0.0010	J	mg/L	1	8/22/2019 5:59:35 PM	46990
Lead	ND	0.000055	0.00050		mg/L	1	8/22/2019 5:59:35 PM	46990
Selenium	ND	0.00048	0.0010		mg/L	1	8/22/2019 5:59:35 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 5:59:35 PM	46990
Uranium	0.016	0.000085	0.00050		mg/L	1	8/23/2019 3:24:43 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000064	0.000038	0.00020	J	mg/L	1	8/15/2019 6:54:41 PM	46818
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Methyl tert-butyl ether (MTBE)	99	0.46	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2-Dichloroethane (EDC)	0.96	0.19	1.0	J	µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Acetone	1.4	1.2	10	J	µg/L	1	8/19/2019 4:05:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 4:05:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 4:05:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-005
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 4:05:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 4:05:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 11:51:00 AM
Lab ID: 1908756-005
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 4:05:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 4:05:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/19/2019 4:05:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.7	0	70-130		%Rec	1	8/19/2019 4:05:00 PM	R62227
Surr: Dibromofluoromethane	99.2	0	70-130		%Rec	1	8/19/2019 4:05:00 PM	R62227
Surr: Toluene-d8	98.5	0	70-130		%Rec	1	8/19/2019 4:05:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 2:55:00 PM
Lab ID: 1908756-006
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/16/2019 7:34:11 PM	46825
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/16/2019 7:34:11 PM	46825
Surr: DNOP	104	0	70-130		%Rec	1	8/16/2019 7:34:11 PM	46825
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/14/2019 2:49:44 PM	G62142
Surr: BFB	119	0	65.8-143		%Rec	1	8/14/2019 2:49:44 PM	G62142
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.73	0.073	0.50		mg/L	5	8/14/2019 11:04:41 AM	R62150
Chloride	47	2.5	2.5		mg/L	5	8/14/2019 11:04:41 AM	R62150
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/14/2019 11:04:41 AM	R62150
Bromide	ND	0.089	0.50		mg/L	5	8/14/2019 11:04:41 AM	R62150
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/14/2019 11:04:41 AM	R62150
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/14/2019 11:04:41 AM	R62150
Sulfate	170	0.33	2.5		mg/L	5	8/14/2019 11:04:41 AM	R62150
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.010	0.0025	0.020	J	mg/L	1	9/3/2019 4:15:10 PM	A62619
Barium	0.012	0.00065	0.0020		mg/L	1	9/3/2019 4:15:10 PM	A62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 4:15:10 PM	A62619
Boron	0.75	0.0045	0.040		mg/L	1	9/3/2019 4:15:10 PM	A62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 4:15:10 PM	A62619
Calcium	1.8	0.062	1.0		mg/L	1	9/3/2019 4:15:10 PM	A62619
Chromium	0.0021	0.0015	0.0060	J	mg/L	1	9/3/2019 4:15:10 PM	A62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 4:15:10 PM	A62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 4:15:10 PM	A62619
Iron	ND	0.0087	0.020		mg/L	1	9/3/2019 4:15:10 PM	A62619
Magnesium	0.19	0.050	1.0	J	mg/L	1	9/3/2019 4:15:10 PM	A62619
Manganese	0.0017	0.00029	0.0020	J	mg/L	1	9/3/2019 4:15:10 PM	A62619
Molybdenum	0.0076	0.0067	0.0080	J	mg/L	1	9/3/2019 4:15:10 PM	A62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 4:15:10 PM	A62619
Potassium	0.59	0.16	1.0	J	mg/L	1	9/3/2019 4:15:10 PM	A62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 4:15:10 PM	A62619
Sodium	260	2.1	5.0		mg/L	5	9/9/2019 1:59:13 PM	A62788
Zinc	0.0059	0.0023	0.010	J	mg/L	1	9/3/2019 4:15:10 PM	A62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.26	0.0025	0.020	*	mg/L	1	8/28/2019 1:10:25 PM	46990
Barium	0.014	0.00065	0.0020		mg/L	1	8/28/2019 1:10:25 PM	46990
Beryllium	ND	0.00028	0.0020		mg/L	1	8/28/2019 1:10:25 PM	46990

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/12/2019 2:55:00 PM
Lab ID: 1908756-006
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.70	0.023	0.20		mg/L	5	8/22/2019 8:36:27 PM	46990
Cadmium	ND	0.00074	0.0020		mg/L	1	8/28/2019 1:10:25 PM	46990
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	8/28/2019 1:10:25 PM	46990
Cobalt	ND	0.0031	0.0060		mg/L	1	8/28/2019 1:10:25 PM	46990
Copper	ND	0.0041	0.0060		mg/L	1	8/28/2019 1:10:25 PM	46990
Iron	0.12	0.0087	0.020		mg/L	1	8/28/2019 1:10:25 PM	46990
Manganese	0.0046	0.00029	0.0020		mg/L	1	8/28/2019 1:10:25 PM	46990
Molybdenum	0.0095	0.0067	0.0080		mg/L	1	8/28/2019 1:10:25 PM	46990
Nickel	ND	0.0040	0.010		mg/L	1	8/28/2019 1:10:25 PM	46990
Silver	ND	0.0014	0.0050		mg/L	1	8/28/2019 1:10:25 PM	46990
Zinc	ND	0.0058	0.010		mg/L	1	8/28/2019 1:10:25 PM	46990
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 9:15:48 PM	B62319
Arsenic	0.0012	0.00010	0.0010		mg/L	1	8/21/2019 9:15:48 PM	B62319
Lead	0.000099	0.000055	0.00050	J	mg/L	1	8/21/2019 9:15:48 PM	B62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 9:15:48 PM	B62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 9:15:48 PM	B62319
Uranium	0.010	0.000075	0.00050		mg/L	1	8/21/2019 9:15:48 PM	B62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 6:01:47 PM	46990
Arsenic	0.0013	0.00031	0.0010		mg/L	1	8/22/2019 6:01:47 PM	46990
Lead	0.00037	0.000055	0.00050	J	mg/L	1	8/22/2019 6:01:47 PM	46990
Selenium	ND	0.00048	0.0010		mg/L	1	8/22/2019 6:01:47 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 6:01:47 PM	46990
Uranium	0.010	0.000085	0.00050		mg/L	1	8/23/2019 3:26:54 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000054	0.000038	0.00020	J	mg/L	1	8/15/2019 6:56:54 PM	46818
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Acenaphthylene	ND	2.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Aniline	ND	3.6	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Anthracene	ND	2.7	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Azobenzene	ND	3.3	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/22/2019 12:53:04 PM	46870

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Lab ID: 1908756-006
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Benzoic acid	ND	11	20		µg/L	1	8/22/2019 12:53:04 PM	46870
Benzyl alcohol	ND	2.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/22/2019 12:53:04 PM	46870
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Carbazole	ND	2.9	10		µg/L	1	8/22/2019 12:53:04 PM	46870
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
4-Chloroaniline	ND	2.3	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2-Chlorophenol	ND	2.7	10		µg/L	1	8/22/2019 12:53:04 PM	46870
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Chrysene	ND	2.8	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Dibenzofuran	ND	3.2	10		µg/L	1	8/22/2019 12:53:04 PM	46870
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/22/2019 12:53:04 PM	46870
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/22/2019 12:53:04 PM	46870
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Diethyl phthalate	ND	2.9	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/22/2019 12:53:04 PM	46870
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/22/2019 12:53:04 PM	46870
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/22/2019 12:53:04 PM	46870
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Fluoranthene	ND	2.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Fluorene	ND	2.9	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Hexachloroethane	ND	4.8	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/22/2019 12:53:04 PM	46870

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Collection Date: 8/12/2019 2:55:00 PM
Lab ID: 1908756-006
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2-Methylphenol	ND	2.9	10		µg/L	1	8/22/2019 12:53:04 PM	46870
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/22/2019 12:53:04 PM	46870
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/22/2019 12:53:04 PM	46870
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Naphthalene	ND	4.1	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 12:53:04 PM	46870
3-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 12:53:04 PM	46870
4-Nitroaniline	ND	2.7	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Nitrobenzene	ND	2.8	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2-Nitrophenol	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
4-Nitrophenol	ND	7.6	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Pentachlorophenol	ND	2.7	20		µg/L	1	8/22/2019 12:53:04 PM	46870
Phenanthrene	ND	2.8	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Phenol	ND	8.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Pyrene	ND	2.5	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Pyridine	ND	9.6	10		µg/L	1	8/22/2019 12:53:04 PM	46870
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/22/2019 12:53:04 PM	46870
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/22/2019 12:53:04 PM	46870
Surr: 2-Fluorophenol	60.0	0	15-101		%Rec	1	8/22/2019 12:53:04 PM	46870
Surr: Phenol-d5	45.9	0	15-84.6		%Rec	1	8/22/2019 12:53:04 PM	46870
Surr: 2,4,6-Tribromophenol	69.3	0	27.8-112		%Rec	1	8/22/2019 12:53:04 PM	46870
Surr: Nitrobenzene-d5	88.9	0	33-113		%Rec	1	8/22/2019 12:53:04 PM	46870
Surr: 2-Fluorobiphenyl	80.5	0	26.6-107		%Rec	1	8/22/2019 12:53:04 PM	46870
Surr: 4-Terphenyl-d14	80.2	0	18.7-148		%Rec	1	8/22/2019 12:53:04 PM	46870
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 4:29:00 PM	R62227

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CLIENT: MARATHON GALLUP
Client Sample ID: MW-1
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Lab ID: 1908756-006
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 4:29:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 4:29:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 4:29:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 4:29:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 4:29:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 4:29:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 4:29:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/19/2019 4:29:00 PM	R62227
Surr: 4-Bromofluorobenzene	98.7	0	70-130		%Rec	1	8/19/2019 4:29:00 PM	R62227
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	8/19/2019 4:29:00 PM	R62227
Surr: Toluene-d8	97.6	0	70-130		%Rec	1	8/19/2019 4:29:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 8:00:00 AM
Lab ID: 1908756-007
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 4:54:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 4:54:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 4:54:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 4:54:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 8:00:00 AM
Lab ID: 1908756-007
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 4:54:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 4:54:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 4:54:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 4:54:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	8/19/2019 4:54:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.6	0	70-130		%Rec	1	8/19/2019 4:54:00 PM	R62227
Surr: Dibromofluoromethane	99.3	0	70-130		%Rec	1	8/19/2019 4:54:00 PM	R62227
Surr: Toluene-d8	99.8	0	70-130		%Rec	1	8/19/2019 4:54:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 8:00:00 AM
Lab ID: 1908756-008
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Toluene	0.52	0.35	1.0	J	µg/L	1	8/19/2019 5:19:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Acetone	1.4	1.2	10	J	µg/L	1	8/19/2019 5:19:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 5:19:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 5:19:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Chlorobenzene	0.67	0.19	1.0	J	µg/L	1	8/19/2019 5:19:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 5:19:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 8:00:00 AM
Lab ID: 1908756-008
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 5:19:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 5:19:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 5:19:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 5:19:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/19/2019 5:19:00 PM	R62227
Surr: 4-Bromofluorobenzene	97.4	0	70-130		%Rec	1	8/19/2019 5:19:00 PM	R62227
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	8/19/2019 5:19:00 PM	R62227
Surr: Toluene-d8	98.5	0	70-130		%Rec	1	8/19/2019 5:19:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:00:00 PM
Lab ID: 1908756-009
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/16/2019 7:58:15 PM	46825
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/16/2019 7:58:15 PM	46825
Surr: DNOP	110	0	70-130		%Rec	1	8/16/2019 7:58:15 PM	46825
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/14/2019 3:13:19 PM	G62142
Surr: BFB	117	0	65.8-143		%Rec	1	8/14/2019 3:13:19 PM	G62142
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.74	0.073	0.50		mg/L	5	8/14/2019 11:30:24 AM	R62150
Chloride	54	2.5	2.5		mg/L	5	8/14/2019 11:30:24 AM	R62150
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/14/2019 11:30:24 AM	R62150
Bromide	ND	0.089	0.50		mg/L	5	8/14/2019 11:30:24 AM	R62150
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/14/2019 11:30:24 AM	R62150
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/14/2019 11:30:24 AM	R62150
Sulfate	170	0.33	2.5		mg/L	5	8/14/2019 11:30:24 AM	R62150
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0027	0.0025	0.020	J	mg/L	1	9/3/2019 4:25:20 PM	A62619
Barium	0.017	0.00065	0.0020		mg/L	1	9/3/2019 4:25:20 PM	A62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 4:25:20 PM	A62619
Boron	0.78	0.0045	0.040		mg/L	1	9/3/2019 4:25:20 PM	A62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 4:25:20 PM	A62619
Calcium	1.5	0.062	1.0		mg/L	1	9/3/2019 4:25:20 PM	A62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 4:25:20 PM	A62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 4:25:20 PM	A62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 4:25:20 PM	A62619
Iron	ND	0.0087	0.020		mg/L	1	9/3/2019 4:25:20 PM	A62619
Magnesium	0.15	0.050	1.0	J	mg/L	1	9/3/2019 4:25:20 PM	A62619
Manganese	0.0018	0.00029	0.0020	J	mg/L	1	9/3/2019 4:25:20 PM	A62619
Molybdenum	0.0091	0.0067	0.0080		mg/L	1	9/3/2019 4:25:20 PM	A62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 4:25:20 PM	A62619
Potassium	0.61	0.16	1.0	J	mg/L	1	9/3/2019 4:25:20 PM	A62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 4:25:20 PM	A62619
Sodium	280	2.1	5.0		mg/L	5	9/6/2019 2:36:16 PM	A62735
Zinc	0.010	0.0023	0.010		mg/L	1	9/3/2019 4:25:20 PM	A62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.015	0.0025	0.020	J	mg/L	1	8/22/2019 8:42:27 PM	46968
Barium	0.018	0.00065	0.0020		mg/L	1	8/22/2019 8:42:27 PM	46968
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 8:42:27 PM	46968

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:00:00 PM
Lab ID: 1908756-009
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.75	0.0045	0.040		mg/L	1	8/22/2019 8:42:27 PM	46968
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 8:42:27 PM	46968
Chromium	ND	0.0015	0.0060		mg/L	1	8/22/2019 8:42:27 PM	46968
Cobalt	ND	0.0031	0.0060		mg/L	1	8/22/2019 8:42:27 PM	46968
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 8:42:27 PM	46968
Iron	0.069	0.0087	0.020		mg/L	1	8/22/2019 8:42:27 PM	46968
Manganese	0.0027	0.00029	0.0020		mg/L	1	8/22/2019 8:42:27 PM	46968
Molybdenum	0.0085	0.0067	0.0080		mg/L	1	8/22/2019 8:42:27 PM	46968
Nickel	ND	0.0040	0.010		mg/L	1	8/22/2019 8:42:27 PM	46968
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 8:42:27 PM	46968
Zinc	0.0075	0.0058	0.010	J	mg/L	1	8/22/2019 8:42:27 PM	46968
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 9:18:29 PM	B62319
Arsenic	0.0011	0.00010	0.0010		mg/L	1	8/21/2019 9:18:29 PM	B62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 9:18:29 PM	B62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 9:18:29 PM	B62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 9:18:29 PM	B62319
Uranium	0.0084	0.000075	0.00050		mg/L	1	8/21/2019 9:18:29 PM	B62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 6:03:58 PM	46990
Arsenic	0.0012	0.00031	0.0010		mg/L	1	8/22/2019 6:03:58 PM	46990
Lead	ND	0.000055	0.00050		mg/L	1	8/22/2019 6:03:58 PM	46990
Selenium	ND	0.00048	0.0010		mg/L	1	8/22/2019 6:03:58 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 6:03:58 PM	46990
Uranium	0.0086	0.000085	0.00050		mg/L	1	8/23/2019 3:29:06 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	8/15/2019 7:03:44 PM	46818
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Acenaphthylene	ND	2.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Aniline	ND	3.6	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Anthracene	ND	2.7	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Azobenzene	ND	3.3	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/22/2019 1:22:30 PM	46870

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Client Sample ID: MW-2
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Collection Date: 8/13/2019 1:00:00 PM
Lab ID: 1908756-009
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Benzoic acid	ND	11	20		µg/L	1	8/22/2019 1:22:30 PM	46870
Benzyl alcohol	ND	2.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/22/2019 1:22:30 PM	46870
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Carbazole	ND	2.9	10		µg/L	1	8/22/2019 1:22:30 PM	46870
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
4-Chloroaniline	ND	2.3	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2-Chlorophenol	ND	2.7	10		µg/L	1	8/22/2019 1:22:30 PM	46870
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Chrysene	ND	2.8	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Dibenzofuran	ND	3.2	10		µg/L	1	8/22/2019 1:22:30 PM	46870
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/22/2019 1:22:30 PM	46870
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/22/2019 1:22:30 PM	46870
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Diethyl phthalate	ND	2.9	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/22/2019 1:22:30 PM	46870
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/22/2019 1:22:30 PM	46870
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/22/2019 1:22:30 PM	46870
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Fluoranthene	ND	2.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Fluorene	ND	2.9	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Hexachloroethane	ND	4.8	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/22/2019 1:22:30 PM	46870

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CLIENT: MARATHON GALLUP
Client Sample ID: MW-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:00:00 PM
Lab ID: 1908756-009
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2-Methylphenol	ND	2.9	10		µg/L	1	8/22/2019 1:22:30 PM	46870
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/22/2019 1:22:30 PM	46870
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/22/2019 1:22:30 PM	46870
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Naphthalene	ND	4.1	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 1:22:30 PM	46870
3-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 1:22:30 PM	46870
4-Nitroaniline	ND	2.7	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Nitrobenzene	ND	2.8	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2-Nitrophenol	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
4-Nitrophenol	ND	7.6	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Pentachlorophenol	ND	2.7	20		µg/L	1	8/22/2019 1:22:30 PM	46870
Phenanthrene	ND	2.8	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Phenol	ND	8.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Pyrene	ND	2.5	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Pyridine	ND	9.6	10		µg/L	1	8/22/2019 1:22:30 PM	46870
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/22/2019 1:22:30 PM	46870
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/22/2019 1:22:30 PM	46870
Surr: 2-Fluorophenol	58.9	0	15-101		%Rec	1	8/22/2019 1:22:30 PM	46870
Surr: Phenol-d5	45.0	0	15-84.6		%Rec	1	8/22/2019 1:22:30 PM	46870
Surr: 2,4,6-Tribromophenol	63.4	0	27.8-112		%Rec	1	8/22/2019 1:22:30 PM	46870
Surr: Nitrobenzene-d5	84.1	0	33-113		%Rec	1	8/22/2019 1:22:30 PM	46870
Surr: 2-Fluorobiphenyl	72.6	0	26.6-107		%Rec	1	8/22/2019 1:22:30 PM	46870
Surr: 4-Terphenyl-d14	77.1	0	18.7-148		%Rec	1	8/22/2019 1:22:30 PM	46870
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 5:43:00 PM	R62227

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 5:43:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 5:43:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 5:43:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 5:43:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 5:43:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:00:00 PM
Lab ID: 1908756-009
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 5:43:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 5:43:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/19/2019 5:43:00 PM	R62227
Surr: 4-Bromofluorobenzene	98.3	0	70-130		%Rec	1	8/19/2019 5:43:00 PM	R62227
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	8/19/2019 5:43:00 PM	R62227
Surr: Toluene-d8	98.5	0	70-130		%Rec	1	8/19/2019 5:43:00 PM	R62227

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: SMW-4
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-010 **Matrix:** AQUEOUS **Received Date:** 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/16/2019 8:22:37 PM	46825
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/16/2019 8:22:37 PM	46825
Surr: DNOP	109	0	70-130		%Rec	1	8/16/2019 8:22:37 PM	46825
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/14/2019 3:36:55 PM	G62142
Surr: BFB	120	0	65.8-143		%Rec	1	8/14/2019 3:36:55 PM	G62142
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.073	0.50		mg/L	5	8/14/2019 12:21:50 PM	R62150
Chloride	59	2.5	2.5		mg/L	5	8/14/2019 12:21:50 PM	R62150
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/14/2019 12:21:50 PM	R62150
Bromide	ND	0.089	0.50		mg/L	5	8/14/2019 12:21:50 PM	R62150
Nitrogen, Nitrate (As N)	0.11	0.025	0.50	J	mg/L	5	8/14/2019 12:21:50 PM	R62150
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/14/2019 12:21:50 PM	R62150
Sulfate	170	0.33	2.5		mg/L	5	8/14/2019 12:21:50 PM	R62150
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.011	0.0025	0.020	J	mg/L	1	9/3/2019 4:27:21 PM	A62619
Barium	0.017	0.00065	0.0020		mg/L	1	9/3/2019 4:27:21 PM	A62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 4:27:21 PM	A62619
Boron	1.7	0.023	0.20		mg/L	5	9/3/2019 5:08:38 PM	A62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 4:27:21 PM	A62619
Calcium	3.5	0.062	1.0		mg/L	1	9/3/2019 4:27:21 PM	A62619
Chromium	0.0026	0.0015	0.0060	J	mg/L	1	9/3/2019 4:27:21 PM	A62619
Cobalt	0.0066	0.0031	0.0060		mg/L	1	9/3/2019 4:27:21 PM	A62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 4:27:21 PM	A62619
Iron	ND	0.0087	0.020		mg/L	1	9/3/2019 4:27:21 PM	A62619
Magnesium	0.81	0.050	1.0	J	mg/L	1	9/3/2019 4:27:21 PM	A62619
Manganese	0.00056	0.00029	0.0020	J	mg/L	1	9/3/2019 4:27:21 PM	A62619
Molybdenum	0.012	0.0067	0.0080		mg/L	1	9/3/2019 4:27:21 PM	A62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 4:27:21 PM	A62619
Potassium	0.48	0.16	1.0	J	mg/L	1	9/3/2019 4:27:21 PM	A62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 4:27:21 PM	A62619
Sodium	300	2.1	5.0		mg/L	5	9/6/2019 2:38:12 PM	A62735
Zinc	0.0075	0.0023	0.010	J	mg/L	1	9/3/2019 4:27:21 PM	A62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.90	0.0025	0.020	*	mg/L	1	8/22/2019 8:46:25 PM	46990
Barium	0.023	0.00065	0.0020		mg/L	1	8/22/2019 8:46:25 PM	46990
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 8:46:25 PM	46990

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: SMW-4
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-010
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.6	0.023	0.20		mg/L	5	8/22/2019 8:48:28 PM	46990
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 8:46:25 PM	46990
Chromium	0.0034	0.0015	0.0060	J	mg/L	1	8/22/2019 8:46:25 PM	46990
Cobalt	0.0092	0.0031	0.0060		mg/L	1	8/22/2019 8:46:25 PM	46990
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 8:46:25 PM	46990
Iron	0.41	0.0087	0.020	*	mg/L	1	8/22/2019 8:46:25 PM	46990
Manganese	0.0086	0.00029	0.0020		mg/L	1	8/22/2019 8:46:25 PM	46990
Molybdenum	0.010	0.0067	0.0080		mg/L	1	8/22/2019 8:46:25 PM	46990
Nickel	0.0041	0.0040	0.010	J	mg/L	1	8/22/2019 8:46:25 PM	46990
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 8:46:25 PM	46990
Zinc	0.0058	0.0058	0.010	J	mg/L	1	8/22/2019 8:46:25 PM	46990
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 9:21:12 PM	B62319
Arsenic	0.0031	0.00010	0.0010		mg/L	1	8/21/2019 9:21:12 PM	B62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 9:21:12 PM	B62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 9:21:12 PM	B62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 9:21:12 PM	B62319
Uranium	0.031	0.00037	0.0025	*	mg/L	5	9/19/2019 7:33:58 PM	B63058
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 6:10:36 PM	46990
Arsenic	0.0034	0.00031	0.0010		mg/L	1	8/22/2019 6:10:36 PM	46990
Lead	0.00037	0.000055	0.00050	J	mg/L	1	8/22/2019 6:10:36 PM	46990
Selenium	ND	0.00048	0.0010		mg/L	1	8/22/2019 6:10:36 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 6:10:36 PM	46990
Uranium	0.030	0.00042	0.0025		mg/L	5	8/23/2019 3:31:17 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000054	0.000038	0.00020	J	mg/L	1	8/15/2019 7:05:57 PM	46818
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Acenaphthylene	ND	2.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Aniline	ND	3.6	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Anthracene	ND	2.7	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Azobenzene	ND	3.3	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/22/2019 1:52:01 PM	46870

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: SMW-4
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-010
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Benzoic acid	ND	11	20		µg/L	1	8/22/2019 1:52:01 PM	46870
Benzyl alcohol	ND	2.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/22/2019 1:52:01 PM	46870
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Carbazole	ND	2.9	10		µg/L	1	8/22/2019 1:52:01 PM	46870
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
4-Chloroaniline	ND	2.3	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2-Chlorophenol	ND	2.7	10		µg/L	1	8/22/2019 1:52:01 PM	46870
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Chrysene	ND	2.8	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Dibenzofuran	ND	3.2	10		µg/L	1	8/22/2019 1:52:01 PM	46870
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/22/2019 1:52:01 PM	46870
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/22/2019 1:52:01 PM	46870
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Diethyl phthalate	ND	2.9	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/22/2019 1:52:01 PM	46870
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/22/2019 1:52:01 PM	46870
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/22/2019 1:52:01 PM	46870
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Fluoranthene	ND	2.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Fluorene	ND	2.9	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Hexachloroethane	ND	4.8	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/22/2019 1:52:01 PM	46870

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: SMW-4
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-010
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2-Methylphenol	ND	2.9	10		µg/L	1	8/22/2019 1:52:01 PM	46870
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/22/2019 1:52:01 PM	46870
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/22/2019 1:52:01 PM	46870
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Naphthalene	ND	4.1	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 1:52:01 PM	46870
3-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 1:52:01 PM	46870
4-Nitroaniline	ND	2.7	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Nitrobenzene	ND	2.8	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2-Nitrophenol	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
4-Nitrophenol	ND	7.6	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Pentachlorophenol	ND	2.7	20		µg/L	1	8/22/2019 1:52:01 PM	46870
Phenanthrene	ND	2.8	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Phenol	ND	8.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Pyrene	ND	2.5	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Pyridine	ND	9.6	10		µg/L	1	8/22/2019 1:52:01 PM	46870
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/22/2019 1:52:01 PM	46870
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/22/2019 1:52:01 PM	46870
Surr: 2-Fluorophenol	59.5	0	15-101		%Rec	1	8/22/2019 1:52:01 PM	46870
Surr: Phenol-d5	46.5	0	15-84.6		%Rec	1	8/22/2019 1:52:01 PM	46870
Surr: 2,4,6-Tribromophenol	66.6	0	27.8-112		%Rec	1	8/22/2019 1:52:01 PM	46870
Surr: Nitrobenzene-d5	90.2	0	33-113		%Rec	1	8/22/2019 1:52:01 PM	46870
Surr: 2-Fluorobiphenyl	79.9	0	26.6-107		%Rec	1	8/22/2019 1:52:01 PM	46870
Surr: 4-Terphenyl-d14	81.4	0	18.7-148		%Rec	1	8/22/2019 1:52:01 PM	46870
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 6:08:00 PM	R62227

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: SMW-4
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-010
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 6:08:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 6:08:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 6:08:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 6:08:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 6:08:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: SMW-4
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-010
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 6:08:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 6:08:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/19/2019 6:08:00 PM	R62227
Surr: 4-Bromofluorobenzene	97.1	0	70-130		%Rec	1	8/19/2019 6:08:00 PM	R62227
Surr: Dibromofluoromethane	98.3	0	70-130		%Rec	1	8/19/2019 6:08:00 PM	R62227
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	8/19/2019 6:08:00 PM	R62227

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CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-011
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/16/2019 8:47:14 PM	46825
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/16/2019 8:47:14 PM	46825
Surr: DNOP	110	0	70-130		%Rec	1	8/16/2019 8:47:14 PM	46825
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/14/2019 4:00:29 PM	G62142
Surr: BFB	120	0	65.8-143		%Rec	1	8/14/2019 4:00:29 PM	G62142
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.073	0.50		mg/L	5	8/14/2019 12:47:34 PM	R62150
Chloride	57	2.5	2.5		mg/L	5	8/14/2019 12:47:34 PM	R62150
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/14/2019 12:47:34 PM	R62150
Bromide	ND	0.089	0.50		mg/L	5	8/14/2019 12:47:34 PM	R62150
Nitrogen, Nitrate (As N)	0.12	0.025	0.50	J	mg/L	5	8/14/2019 12:47:34 PM	R62150
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/14/2019 12:47:34 PM	R62150
Sulfate	170	0.33	2.5		mg/L	5	8/14/2019 12:47:34 PM	R62150
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.014	0.0025	0.020	J	mg/L	1	9/3/2019 4:29:20 PM	A62619
Barium	0.017	0.00065	0.0020		mg/L	1	9/3/2019 4:29:20 PM	A62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 4:29:20 PM	A62619
Boron	1.7	0.023	0.20		mg/L	5	9/3/2019 5:10:37 PM	A62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 4:29:20 PM	A62619
Calcium	3.5	0.062	1.0		mg/L	1	9/3/2019 4:29:20 PM	A62619
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	9/3/2019 4:29:20 PM	A62619
Cobalt	0.0065	0.0031	0.0060		mg/L	1	9/3/2019 4:29:20 PM	A62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 4:29:20 PM	A62619
Iron	0.0090	0.0087	0.020	J	mg/L	1	9/3/2019 4:29:20 PM	A62619
Magnesium	0.81	0.050	1.0	J	mg/L	1	9/3/2019 4:29:20 PM	A62619
Manganese	0.00056	0.00029	0.0020	J	mg/L	1	9/3/2019 4:29:20 PM	A62619
Molybdenum	0.011	0.0067	0.0080		mg/L	1	9/3/2019 4:29:20 PM	A62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 4:29:20 PM	A62619
Potassium	0.54	0.16	1.0	J	mg/L	1	9/3/2019 4:29:20 PM	A62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 4:29:20 PM	A62619
Sodium	310	2.1	5.0		mg/L	5	9/6/2019 2:40:10 PM	A62735
Zinc	0.0054	0.0023	0.010	J	mg/L	1	9/3/2019 4:29:20 PM	A62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.95	0.0025	0.020	*	mg/L	1	8/22/2019 8:57:22 PM	46990
Barium	0.023	0.00065	0.0020		mg/L	1	8/22/2019 8:57:22 PM	46990
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 8:57:22 PM	46990

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.7	0.023	0.20		mg/L	5	8/22/2019 8:59:28 PM	46990
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 8:57:22 PM	46990
Chromium	0.0039	0.0015	0.0060	J	mg/L	1	8/22/2019 8:57:22 PM	46990
Cobalt	0.0093	0.0031	0.0060		mg/L	1	8/22/2019 8:57:22 PM	46990
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 8:57:22 PM	46990
Iron	0.40	0.0087	0.020	*	mg/L	1	8/22/2019 8:57:22 PM	46990
Manganese	0.0085	0.00029	0.0020		mg/L	1	8/22/2019 8:57:22 PM	46990
Molybdenum	0.011	0.0067	0.0080		mg/L	1	8/22/2019 8:57:22 PM	46990
Nickel	ND	0.0040	0.010		mg/L	1	8/22/2019 8:57:22 PM	46990
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 8:57:22 PM	46990
Zinc	0.0064	0.0058	0.010	J	mg/L	1	8/22/2019 8:57:22 PM	46990
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 9:23:55 PM	B62319
Arsenic	0.0031	0.00010	0.0010		mg/L	1	8/21/2019 9:23:55 PM	B62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 9:23:55 PM	B62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 9:23:55 PM	B62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 9:23:55 PM	B62319
Uranium	0.031	0.00037	0.0025	*	mg/L	5	9/19/2019 7:36:36 PM	B63058
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 6:12:47 PM	46990
Arsenic	0.0036	0.00031	0.0010		mg/L	1	8/22/2019 6:12:47 PM	46990
Lead	0.00035	0.000055	0.00050	J	mg/L	1	8/22/2019 6:12:47 PM	46990
Selenium	ND	0.00048	0.0010		mg/L	1	8/22/2019 6:12:47 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 6:12:47 PM	46990
Uranium	0.029	0.00042	0.0025		mg/L	5	8/23/2019 3:33:28 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000044	0.000038	0.00020	J	mg/L	1	8/15/2019 7:08:11 PM	46818
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Acenaphthylene	ND	2.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Aniline	ND	3.6	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Anthracene	ND	2.7	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Azobenzene	ND	3.3	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/22/2019 2:21:28 PM	46870

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Benzoic acid	ND	11	20		µg/L	1	8/22/2019 2:21:28 PM	46870
Benzyl alcohol	ND	2.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/22/2019 2:21:28 PM	46870
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Carbazole	ND	2.9	10		µg/L	1	8/22/2019 2:21:28 PM	46870
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
4-Chloroaniline	ND	2.3	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2-Chlorophenol	ND	2.7	10		µg/L	1	8/22/2019 2:21:28 PM	46870
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Chrysene	ND	2.8	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Dibenzofuran	ND	3.2	10		µg/L	1	8/22/2019 2:21:28 PM	46870
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/22/2019 2:21:28 PM	46870
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/22/2019 2:21:28 PM	46870
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Diethyl phthalate	ND	2.9	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/22/2019 2:21:28 PM	46870
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/22/2019 2:21:28 PM	46870
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/22/2019 2:21:28 PM	46870
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Fluoranthene	ND	2.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Fluorene	ND	2.9	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Hexachloroethane	ND	4.8	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/22/2019 2:21:28 PM	46870

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-011
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2-Methylphenol	ND	2.9	10		µg/L	1	8/22/2019 2:21:28 PM	46870
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/22/2019 2:21:28 PM	46870
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/22/2019 2:21:28 PM	46870
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Naphthalene	ND	4.1	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 2:21:28 PM	46870
3-Nitroaniline	ND	3.2	10		µg/L	1	8/22/2019 2:21:28 PM	46870
4-Nitroaniline	ND	2.7	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Nitrobenzene	ND	2.8	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2-Nitrophenol	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
4-Nitrophenol	ND	7.6	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Pentachlorophenol	ND	2.7	20		µg/L	1	8/22/2019 2:21:28 PM	46870
Phenanthrene	ND	2.8	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Phenol	ND	8.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Pyrene	ND	2.5	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Pyridine	ND	9.6	10		µg/L	1	8/22/2019 2:21:28 PM	46870
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/22/2019 2:21:28 PM	46870
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/22/2019 2:21:28 PM	46870
Surr: 2-Fluorophenol	57.9	0	15-101		%Rec	1	8/22/2019 2:21:28 PM	46870
Surr: Phenol-d5	43.5	0	15-84.6		%Rec	1	8/22/2019 2:21:28 PM	46870
Surr: 2,4,6-Tribromophenol	68.5	0	27.8-112		%Rec	1	8/22/2019 2:21:28 PM	46870
Surr: Nitrobenzene-d5	86.3	0	33-113		%Rec	1	8/22/2019 2:21:28 PM	46870
Surr: 2-Fluorobiphenyl	70.7	0	26.6-107		%Rec	1	8/22/2019 2:21:28 PM	46870
Surr: 4-Terphenyl-d14	81.5	0	18.7-148		%Rec	1	8/22/2019 2:21:28 PM	46870
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 6:33:00 PM	R62227

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-011
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 6:33:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 6:33:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 6:33:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 6:33:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 6:33:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/13/2019 1:15:00 PM
Lab ID: 1908756-011
Matrix: AQUEOUS
Received Date: 8/13/2019 4:40:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 6:33:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 6:33:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/19/2019 6:33:00 PM	R62227
Surr: 4-Bromofluorobenzene	97.3	0	70-130		%Rec	1	8/19/2019 6:33:00 PM	R62227
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	8/19/2019 6:33:00 PM	R62227
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	8/19/2019 6:33:00 PM	R62227

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 22, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1129256

Samples Received: 08/15/2019

Project Number:

Description:

Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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1908756-006G MW-1 L1129256-01 WW

Collected by | Collected date/time 08/12/19 12:55 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332178	1	08/21/19 09:37	08/21/19 15:29	JER	Mt. Juliet, TN

1908756-009G MW-2 L1129256-02 WW

Collected by | Collected date/time 08/13/19 13:00 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332178	1	08/21/19 09:37	08/21/19 15:34	JER	Mt. Juliet, TN

1908756-010G SMW-4 L1129256-03 WW

Collected by | Collected date/time 08/13/19 13:15 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332178	1	08/21/19 09:37	08/21/19 15:36	JER	Mt. Juliet, TN

1908756-011G DUPLICATE L1129256-04 WW

Collected by | Collected date/time 08/13/19 13:15 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332682	1	08/21/19 22:43	08/22/19 13:44	JER	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND	J3 J6	0.00500	1	08/21/2019 15:29	WG1332178

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/21/2019 15:34	WG1332178

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/21/2019 15:36	WG1332178

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND	J3 J6	0.00500	1	08/22/2019 13:44	WG1332682

Method Blank (MB)

(MB) R3442802-1 08/21/19 15:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1129020-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1129020-02 08/21/19 15:15 • (DUP) R3442802-3 08/21/19 15:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

L1129256-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1129256-02 08/21/19 15:34 • (DUP) R3442802-8 08/21/19 15:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3442802-2 08/21/19 15:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0968	96.8	85.0-115	

L1129102-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129102-01 08/21/19 15:21 • (MS) R3442802-4 08/21/19 15:22 • (MSD) R3442802-5 08/21/19 15:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.366	0.437	0.425	71.0	59.0	1	75.0-125	E J6	E J6	2.78	20

L1129256-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129256-01 08/21/19 15:29 • (MS) R3442802-6 08/21/19 15:32 • (MSD) R3442802-7 08/21/19 15:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0831	0.0470	83.1	47.0	1	75.0-125		J3 J6	55.5	20

Method Blank (MB)

(MB) R3443227-1 08/22/19 13:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1129171-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1129171-11 08/22/19 13:39 • (DUP) R3443227-5 08/22/19 13:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	0.00243	0.00280	1	14.1	J	20

L1130585-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1130585-01 08/22/19 13:57 • (DUP) R3443227-8 08/22/19 13:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443227-2 08/22/19 13:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.105	105	85.0-115	

L1129102-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129102-01 08/22/19 13:31 • (MS) R3443227-3 08/22/19 13:32 • (MSD) R3443227-4 08/22/19 13:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.444	0.563	0.540	119	96.0	1	75.0-125	E	E	4.17	20

L1129256-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129256-04 08/22/19 13:44 • (MS) R3443227-6 08/22/19 13:45 • (MSD) R3443227-7 08/22/19 13:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0929	0.0729	92.9	72.9	1	75.0-125		J3 J6	24.1	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

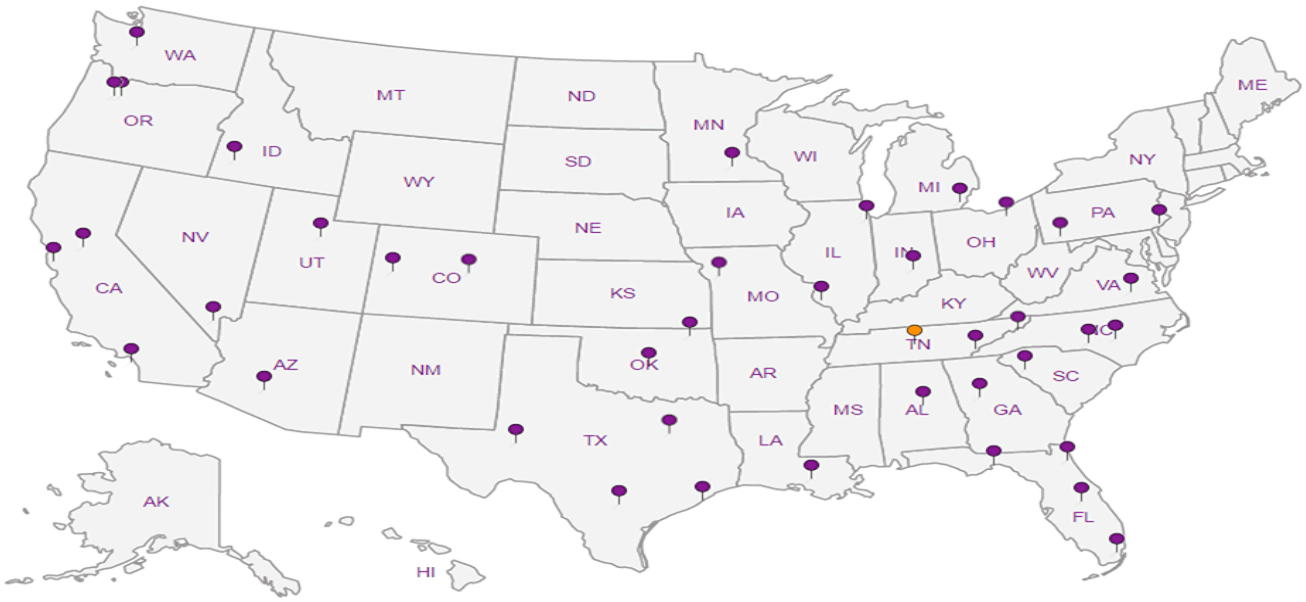
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

C249

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: **ESC PACE**	COMPANY: **ESC PACE**	PHONE: **(800) 767-5859**	FAX: **(615) 758-5859**
ADDRESS: **12065 Lebanon Rd**		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: **Mt. Juliet, TN 37122**			L1129256

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	1908756-006G	MW-1	500AMBHDP F-NAOH	Aqueous	8/12/2019 12:55:00 PM	1	Total Cyanide Lv. 4 >12	-01
2	1908756-009G	MW-2	500AMBHDP F-NAOH	Aqueous	8/13/2019 1:00:00 PM	1	Total Cyanide Lv. 4	-02
3	1908756-010G	SMW-4	500AMBHDP F-NAOH	Aqueous	8/13/2019 1:15:00 PM	1	Total Cyanide Lv. 4	-03
4	1908756-011G	Duplicate	500AMBHDP F-NAOH	Aqueous	8/13/2019 1:15:00 PM	1	Total Cyanide Lv. 4	-04

RAD SCREEN: <0.5 mR/hr

SPECIAL INSTRUCTIONS / COMMENTS: Fedex 4510 1668 8392

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 8/14/2019	Time: 10:21 AM	Received By:	Date: 8/15/19	Time: 6:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard [X] **RUSH** Next BD [ ] 2nd BD [ ] 3rd BD [ ]

REPORT TRANSMITTAL DESIRED:
[ ] HARDCOPY (extra cost) [ ] FAX [ ] EMAIL [ ] ONLINE

FOR LAB USE ONLY
Temp of samples 1.6 +0.1 -0.2 °C Attempt to Cool ? OK
Comments: COC's

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: ~~HALLA~~ HALLENIAM	SDG#:	L1120250
Cooler Received/Opened On: 8 / 15 /19	Temperature:	1.6
Received By: Adam Burns		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46990** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **46990** RunNo: **62375**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2120149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0031	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-46990** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **46990** RunNo: **62375**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2120151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.014	0.020	0.01000	0	140	50	150			J
Barium	0.0020	0.0020	0.002000	0	98.7	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	91.9	50	150			J
Boron	0.038	0.040	0.04000	0	94.8	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	94.5	50	150			J
Chromium	0.0056	0.0060	0.006000	0	92.9	50	150			J
Cobalt	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0061	0.0060	0.006000	0	102	50	150			
Iron	0.016	0.020	0.02000	0	80.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.0081	0.0080	0.008000	0	101	50	150			
Nickel	0.0047	0.010	0.005000	0	94.6	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.1	50	150			J
Zinc	0.015	0.010	0.01000	0	146	50	150			

Sample ID: **LCS-46990** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **46990** RunNo: **62375**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2120153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-46990** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **46990** RunNo: **62375**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2120153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.45	0.0020	0.5000	0	90.8	85	115			
Beryllium	0.47	0.0020	0.5000	0	94.1	85	115			
Boron	0.47	0.040	0.5000	0	93.5	85	115			
Cadmium	0.47	0.0020	0.5000	0	93.2	85	115			
Chromium	0.47	0.0060	0.5000	0	93.8	85	115			
Cobalt	0.45	0.0060	0.5000	0	89.2	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Iron	0.47	0.020	0.5000	0	93.8	85	115			
Manganese	0.46	0.0020	0.5000	0	91.3	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.8	85	115			
Nickel	0.45	0.010	0.5000	0	90.9	85	115			
Silver	0.095	0.0050	0.1000	0	95.2	85	115			
Zinc	0.45	0.010	0.5000	0	90.4	85	115			

Sample ID: **1908756-006EMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MW-1** Batch ID: **46990** RunNo: **62375**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2120231** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.1	0.20	0.5000	0.6973	85.8	70	130			

Sample ID: **1908756-006EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MW-1** Batch ID: **46990** RunNo: **62375**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2120232** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.2	0.20	0.5000	0.6973	96.8	70	130	4.78	20	

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A62442** RunNo: **62442**
Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123347** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **A62442** RunNo: **62442**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123347** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LCSLL** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **A62442** RunNo: **62442**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0092	0.020	0.01000	0	91.5	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0018	0.0020	0.002000	0	90.9	50	150			J
Boron	0.038	0.040	0.04000	0	96.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Cobalt	0.0052	0.0060	0.006000	0	86.7	50	150			J
Copper	0.0056	0.0060	0.006000	0	92.6	50	150			J
Iron	0.020	0.020	0.02000	0	100	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.8	50	150			J
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0064	0.010	0.005000	0	128	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.6	50	150			J
Zinc	0.010	0.010	0.01000	0	99.8	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A62442** RunNo: **62442**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.47	0.0020	0.5000	0	94.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.49	0.040	0.5000	0	97.8	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A62442** RunNo: **62442**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.48	0.0060	0.5000	0	96.7	85	115			
Copper	0.48	0.0060	0.5000	0	96.8	85	115			
Iron	0.49	0.020	0.5000	0	98.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.3	85	115			
Nickel	0.48	0.010	0.5000	0	95.5	85	115			
Silver	0.096	0.0050	0.1000	0	96.2	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Sample ID: **1908756-005DMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **DUPLICATE** Batch ID: **46990** RunNo: **62480**

Prep Date: **8/22/2019** Analysis Date: **8/28/2019** SeqNo: **2125160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.48	0.020	0.5000	0	96.9	70	130			
Barium	0.48	0.0020	0.5000	0.01876	93.1	70	130			
Beryllium	0.50	0.0020	0.5000	0	101	70	130			
Boron	0.80	0.040	0.5000	0.3328	93.5	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.6	70	130			
Chromium	0.48	0.0060	0.5000	0	95.3	70	130			
Cobalt	0.49	0.0060	0.5000	0	97.2	70	130			
Copper	0.47	0.0060	0.5000	0	94.9	70	130			
Iron	0.49	0.020	0.5000	0.008851	96.2	70	130			
Manganese	0.50	0.0020	0.5000	0.01840	95.9	70	130			
Molybdenum	0.49	0.0080	0.5000	0.01139	94.9	70	130			
Nickel	0.46	0.010	0.5000	0.01111	89.4	70	130			
Silver	0.094	0.0050	0.1000	0.005407	88.2	70	130			
Zinc	0.50	0.010	0.5000	0	99.7	70	130			

Sample ID: **1908756-005DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **DUPLICATE** Batch ID: **46990** RunNo: **62480**

Prep Date: **8/22/2019** Analysis Date: **8/28/2019** SeqNo: **2125161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.47	0.020	0.5000	0	94.3	70	130	2.72	20	
Barium	0.47	0.0020	0.5000	0.01876	90.8	70	130	2.40	20	
Beryllium	0.49	0.0020	0.5000	0	98.8	70	130	1.77	20	
Boron	0.78	0.040	0.5000	0.3328	90.1	70	130	2.18	20	
Cadmium	0.48	0.0020	0.5000	0	95.8	70	130	1.81	20	
Chromium	0.46	0.0060	0.5000	0	93.0	70	130	2.44	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908756-005DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **DUPLICATE** Batch ID: **46990** RunNo: **62480**
Prep Date: **8/22/2019** Analysis Date: **8/28/2019** SeqNo: **2125161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.47	0.0060	0.5000	0	94.8	70	130	2.44	20	
Copper	0.46	0.0060	0.5000	0	92.6	70	130	2.45	20	
Iron	0.48	0.020	0.5000	0.008851	94.4	70	130	1.79	20	
Manganese	0.49	0.0020	0.5000	0.01840	93.4	70	130	2.52	20	
Molybdenum	0.48	0.0080	0.5000	0.01139	93.1	70	130	1.91	20	
Nickel	0.45	0.010	0.5000	0.01111	87.4	70	130	2.18	20	
Silver	0.089	0.0050	0.1000	0.005407	83.7	70	130	4.92	20	
Zinc	0.48	0.010	0.5000	0	96.5	70	130	3.22	20	

Sample ID: **1908756-006EMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MW-1** Batch ID: **46990** RunNo: **62480**
Prep Date: **8/22/2019** Analysis Date: **8/28/2019** SeqNo: **2125164** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.76	0.020	0.5000	0.2623	99.9	70	130			
Barium	0.48	0.0020	0.5000	0.01356	93.4	70	130			
Beryllium	0.50	0.0020	0.5000	0	99.4	70	130			
Cadmium	0.49	0.0020	0.5000	0	98.5	70	130			
Chromium	0.48	0.0060	0.5000	0.001747	95.5	70	130			
Cobalt	0.49	0.0060	0.5000	0	97.5	70	130			
Copper	0.47	0.0060	0.5000	0	94.8	70	130			
Iron	0.60	0.020	0.5000	0.1229	95.9	70	130			
Manganese	0.48	0.0020	0.5000	0.004626	95.9	70	130			
Molybdenum	0.49	0.0080	0.5000	0.009459	95.8	70	130			
Nickel	0.46	0.010	0.5000	0	92.6	70	130			
Silver	0.091	0.0050	0.1000	0	90.8	70	130			
Zinc	0.50	0.010	0.5000	0	99.3	70	130			

Sample ID: **1908756-006EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MW-1** Batch ID: **46990** RunNo: **62480**
Prep Date: **8/22/2019** Analysis Date: **8/28/2019** SeqNo: **2125165** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.77	0.020	0.5000	0.2623	101	70	130	0.491	20	
Barium	0.49	0.0020	0.5000	0.01356	95.2	70	130	1.82	20	
Beryllium	0.51	0.0020	0.5000	0	101	70	130	1.90	20	
Cadmium	0.50	0.0020	0.5000	0	100	70	130	1.58	20	
Chromium	0.49	0.0060	0.5000	0.001747	96.7	70	130	1.22	20	
Cobalt	0.50	0.0060	0.5000	0	99.3	70	130	1.86	20	
Copper	0.49	0.0060	0.5000	0	97.4	70	130	2.64	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908756-006EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Metals**
Client ID: **MW-1**	Batch ID: **46990**	RunNo: **62480**
Prep Date: **8/22/2019**	Analysis Date: **8/28/2019**	SeqNo: **2125165** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.59	0.020	0.5000	0.1229	93.2	70	130	2.25	20	
Manganese	0.50	0.0020	0.5000	0.004626	98.1	70	130	2.21	20	
Molybdenum	0.49	0.0080	0.5000	0.009459	96.2	70	130	0.451	20	
Nickel	0.47	0.010	0.5000	0	93.1	70	130	0.625	20	
Silver	0.091	0.0050	0.1000	0	91.4	70	130	0.699	20	
Zinc	0.50	0.010	0.5000	0	101	70	130	1.43	20	

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136529** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136531** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.59	1.0	0.5000	0	118	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136533** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	97.9	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139048** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.56	1.0	0.5000	0	112	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2130981** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2130982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0084	0.020	0.01000	0	84.1	50	150			J
Barium	0.0016	0.0020	0.002000	0	79.2	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	90.2	50	150			J
Boron	0.040	0.040	0.04000	0	98.9	50	150			J
Cadmium	0.0015	0.0020	0.002000	0	73.6	50	150			J
Calcium	0.51	1.0	0.5000	0	103	50	150			J
Chromium	0.0064	0.0060	0.006000	0	107	50	150			
Cobalt	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0061	0.0060	0.006000	0	101	50	150			
Iron	0.021	0.020	0.02000	0	104	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	112	50	150			
Nickel	0.0068	0.010	0.005000	0	135	50	150			J
Potassium	0.45	1.0	0.5000	0	90.2	50	150			J
Silver	0.0042	0.0050	0.005000	0	84.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2130982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.010	0.010	0.01000	0	103	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2130983** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.9	85	115			
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.5	85	115			
Boron	0.50	0.040	0.5000	0	99.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	51	1.0	50.00	0	102	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.0	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.49	0.020	0.5000	0	97.5	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.49	0.0020	0.5000	0	97.3	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.6	85	115			
Nickel	0.48	0.010	0.5000	0	95.8	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.096	0.0050	0.1000	0	95.6	85	115			
Zinc	0.49	0.010	0.5000	0	97.3	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136530** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136532** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.59	1.0	0.5000	0	118	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136534** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	97.9	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.56	1.0	0.5000	0	112	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139053** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908756-003DMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **OW-29** Batch ID: **46990** RunNo: **62354**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2118962** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.029	0.0010	0.02500	0	117	70	130			
Arsenic	0.032	0.0010	0.02500	0.0008705	126	70	130			
Lead	0.011	0.00050	0.01250	0	86.3	70	130			
Selenium	0.032	0.0010	0.02500	0	126	70	130			
Thallium	0.011	0.00050	0.01250	0	87.3	70	130			

Sample ID: **MB-46990** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **46990** RunNo: **62354**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2118972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **MSLLLCS-46990** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **46990** RunNo: **62354**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2118974** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00065	0.0010	0.001000	0	64.8	50	150			J
Arsenic	0.0012	0.0010	0.001000	0	116	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.5	50	150			J
Selenium	0.00081	0.0010	0.001000	0	80.6	50	150			J
Thallium	0.00042	0.00050	0.0005000	0	84.9	50	150			J

Sample ID: **MSLCS-46990** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **46990** RunNo: **62354**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2118976** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	102	85	115			
Arsenic	0.027	0.0010	0.02500	0	107	85	115			
Lead	0.012	0.00050	0.01250	0	97.6	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Thallium	0.012	0.00050	0.01250	0	96.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46990**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **46990**	RunNo: **62384**							
Prep Date: **8/22/2019**	Analysis Date: **8/23/2019**	SeqNo: **2120655**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-46990**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **46990**	RunNo: **62384**							
Prep Date: **8/22/2019**	Analysis Date: **8/23/2019**	SeqNo: **2120657**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID: **MSLCS-46990**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **46990**	RunNo: **62384**							
Prep Date: **8/22/2019**	Analysis Date: **8/23/2019**	SeqNo: **2120659**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **1908756-003DMSLL**	SampType: **MSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **OW-29**	Batch ID: **46990**	RunNo: **62384**							
Prep Date: **8/22/2019**	Analysis Date: **8/23/2019**	SeqNo: **2121163**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.062	0.0025	0.01250	0.04901	103	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126594**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126595**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126595**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00098	0.0010	0.001000	0	98.5	50	150			J
Arsenic	0.0011	0.0010	0.001000	0	105	50	150			
Lead	0.00051	0.00050	0.0005000	0	103	50	150			
Selenium	0.00089	0.0010	0.001000	0	89.4	50	150			J
Thallium	0.00049	0.00050	0.0005000	0	98.9	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126596**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	98.7	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Lead	0.012	0.00050	0.01250	0	99.3	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.012	0.00050	0.01250	0	99.3	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62319**	RunNo: **62319**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117804** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00051	0.0010								J
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62319**	RunNo: **62319**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117805** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00081	0.0010	0.001000	0	81.5	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.9	50	150			J
Selenium	0.00079	0.0010	0.001000	0	79.2	50	150			J
Thallium	0.00049	0.00050	0.0005000	0	98.0	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	101	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62319**	RunNo: **62319**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117806** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.8	85	115			
Arsenic	0.024	0.0010	0.02500	0	96.6	85	115			
Lead	0.012	0.00050	0.01250	0	98.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.7	85	115			
Thallium	0.012	0.00050	0.01250	0	98.2	85	115			
Uranium	0.012	0.00050	0.01250	0	98.4	85	115			

Sample ID: **1908756-003EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-29**	Batch ID: **B62319**	RunNo: **62319**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117811** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	108	70	130			
Arsenic	0.028	0.0010	0.02500	0.0006854	111	70	130			
Lead	0.012	0.00050	0.01250	0	94.3	70	130			
Selenium	0.025	0.0010	0.02500	0	99.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908756-003EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-29**	Batch ID: **B62319**	RunNo: **62319**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117811** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.012	0.00050	0.01250	0	92.6	70	130			

Sample ID: **1908756-003EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-29**	Batch ID: **B62319**	RunNo: **62319**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0	111	70	130	2.39	20	
Arsenic	0.028	0.0010	0.02500	0.0006854	111	70	130	0.186	20	
Lead	0.012	0.00050	0.01250	0	93.9	70	130	0.493	20	
Selenium	0.027	0.0010	0.02500	0	108	70	130	8.06	20	
Thallium	0.012	0.00050	0.01250	0	93.1	70	130	0.500	20	

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128563** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	99.8	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B63058**	RunNo: **63058**
Prep Date:	Analysis Date: **9/19/2019**	SeqNo: **2152103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B63058**	RunNo: **63058**
Prep Date:	Analysis Date: **9/19/2019**	SeqNo: **2152106** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00053	0.00050	0.0005000	0	105	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B63058**	RunNo: **63058**
Prep Date:	Analysis Date: **9/19/2019**	SeqNo: **2152107** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46818**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **PBW**	Batch ID: **46818**	RunNo: **62194**							
Prep Date: **8/15/2019**	Analysis Date: **8/15/2019**	SeqNo: **2111725**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000041	0.00020								J

Sample ID: **LCS-46818**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **LCSW**	Batch ID: **46818**	RunNo: **62194**							
Prep Date: **8/15/2019**	Analysis Date: **8/15/2019**	SeqNo: **2111726**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0058	0.00020	0.005000	0	115	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R62150**	RunNo: **62150**							
Prep Date:	Analysis Date: **8/14/2019**	SeqNo: **2109420**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R62150**	RunNo: **62150**							
Prep Date:	Analysis Date: **8/14/2019**	SeqNo: **2109421**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.9	90	110			
Chloride	4.7	0.50	5.000	0	94.0	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.2	90	110			
Bromide	2.4	0.10	2.500	0	95.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.1	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.2	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-46813** SampType: **LCS** TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW** Batch ID: **46813** RunNo: **62199**
Prep Date: **8/15/2019** Analysis Date: **8/16/2019** SeqNo: **2111908** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.094	0.010	0.1000	0	94.0	70	130			

Sample ID: **LCSD-46813** SampType: **LCSD** TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSS02** Batch ID: **46813** RunNo: **62199**
Prep Date: **8/15/2019** Analysis Date: **8/16/2019** SeqNo: **2111909** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.099	0.010	0.1000	0	98.9	70	130	5.05	20	

Sample ID: **MB-46813** SampType: **MBLK** TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW** Batch ID: **46813** RunNo: **62199**
Prep Date: **8/15/2019** Analysis Date: **8/15/2019** SeqNo: **2111910** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46825**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **46825**	RunNo: **62181**
Prep Date: **8/15/2019**	Analysis Date: **8/17/2019**	SeqNo: **2112522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		95.6	70	130			

Sample ID: **LCS-46825**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **46825**	RunNo: **62181**
Prep Date: **8/15/2019**	Analysis Date: **8/17/2019**	SeqNo: **2112523** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.6	1.0	5.000	0	92.2	71.8	135			
Surr: DNOP	0.39		0.5000		78.2	70	130			

Sample ID: **1908756-003CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-29**	Batch ID: **46825**	RunNo: **62182**
Prep Date: **8/15/2019**	Analysis Date: **8/16/2019**	SeqNo: **2112532** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	68.1	137			
Surr: DNOP	0.53		0.5000		105	70	130			

Sample ID: **1908756-003CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-29**	Batch ID: **46825**	RunNo: **62182**
Prep Date: **8/15/2019**	Analysis Date: **8/16/2019**	SeqNo: **2112533** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.5	68.1	137	6.38	20	
Surr: DNOP	0.50		0.5000		100	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G62142**	RunNo: **62142**
Prep Date:	Analysis Date: **8/14/2019**	SeqNo: **2108959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		101	65.8	143			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G62142**	RunNo: **62142**
Prep Date:	Analysis Date: **8/14/2019**	SeqNo: **2108960** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	99.2	77.7	130			
Surr: BFB	25		20.00		125	65.8	143			

Sample ID: **1908756-003AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-29**	Batch ID: **G62142**	RunNo: **62142**
Prep Date:	Analysis Date: **8/14/2019**	SeqNo: **2108962** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.5	0.25	2.500	3.080	96.2	65.4	140			
Surr: BFB	120		100.0		122	65.8	143			

Sample ID: **1908756-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-29**	Batch ID: **G62142**	RunNo: **62142**
Prep Date:	Analysis Date: **8/14/2019**	SeqNo: **2108963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.6	0.25	2.500	3.080	101	65.4	140	2.36	20	
Surr: BFB	130		100.0		126	65.8	143	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R62227** RunNo: **62227**
Prep Date: Analysis Date: **8/19/2019** SeqNo: **2115557** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	87.5	70	130			
Toluene	19	1.0	20.00	0	95.0	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	83.0	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	82.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.3	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.0	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R62227** RunNo: **62227**
Prep Date: Analysis Date: **8/19/2019** SeqNo: **2115586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.7	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.1	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.5	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcs-46870**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115954** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.3	32.2	94			
4-Chloro-3-methylphenol	160	10	200.0	0	82.1	37.7	101			
2-Chlorophenol	170	10	200.0	0	83.4	32.6	90.1			
1,4-Dichlorobenzene	71	10	100.0	0	71.2	30	87.2			
2,4-Dinitrotoluene	65	10	100.0	0	65.1	35.9	85.8			
N-Nitrosodi-n-propylamine	90	10	100.0	0	90.3	37.1	108			
4-Nitrophenol	94	10	200.0	0	46.9	22.4	86.6			
Pentachlorophenol	120	20	200.0	0	61.7	31.6	91			
Phenol	120	10	200.0	0	58.4	21.7	84.9			
Pyrene	81	10	100.0	0	81.1	46.3	103			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.3	30.2	88.3			
Surr: 2-Fluorophenol	110		200.0		56.4	15	101			
Surr: Phenol-d5	92		200.0		45.8	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		61.2	27.8	112			
Surr: Nitrobenzene-d5	78		100.0		78.2	33	113			
Surr: 2-Fluorobiphenyl	62		100.0		62.1	26.6	107			
Surr: 4-Terphenyl-d14	66		100.0		65.6	18.7	148			

Sample ID: **lcsd-46870**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115955** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.6	32.2	94	4.93	32.9	
4-Chloro-3-methylphenol	160	10	200.0	0	80.4	37.7	101	2.07	29.9	
2-Chlorophenol	150	10	200.0	0	76.9	32.6	90.1	8.13	28.5	
1,4-Dichlorobenzene	71	10	100.0	0	71.2	15	87.2	0.0562	44.9	
2,4-Dinitrotoluene	68	10	100.0	0	67.6	35.9	85.8	3.74	28.5	
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.0	37.1	108	8.47	29.9	
4-Nitrophenol	91	10	200.0	0	45.3	15	86.6	3.53	68	
Pentachlorophenol	110	20	200.0	0	56.6	31.6	91	8.74	39.5	
Phenol	110	10	200.0	0	53.9	15	84.9	7.96	44.2	
Pyrene	76	10	100.0	0	75.8	46.3	103	6.81	23.8	
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	15.7	88.3	1.68	38	
Surr: 2-Fluorophenol	100		200.0		51.3	15	101	0	0	
Surr: Phenol-d5	80		200.0		39.8	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		55.1	27.8	112	0	0	
Surr: Nitrobenzene-d5	75		100.0		75.1	33	113	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		62.8	26.6	107	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcsd-46870**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115955** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	64		100.0		64.0	18.7	148	0	0	

Sample ID: **mb-46870**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-46870**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	4.4	20								J
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908756**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-46870** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **46870** RunNo: **62264**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.3	15	101			
Surr: Phenol-d5	96		200.0		48.0	15	84.6			
Surr: 2,4,6-Tribromophenol	130		200.0		66.0	27.8	112			
Surr: Nitrobenzene-d5	99		100.0		99.2	33	113			
Surr: 2-Fluorobiphenyl	84		100.0		83.9	26.6	107			
Surr: 4-Terphenyl-d14	72		100.0		72.3	18.7	148			

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1908756** RcptNo: **1**

Received By: **Erin Melendrez** **8/13/2019 4:40:00 PM**

Completed By: **Erin Melendrez** **8/14/2019 8:27:10 AM**

Reviewed By: LB 8/14/19 8/15/19 -extra metals LB

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 12:4/16 (2) or >12 unless noted)

Adjusted? NO / NO

Checked by: DAD 8/14/19 / ENM 8/15/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			
2	4.5	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2019 ANNUAL/3Rd QTR GW SAMPLING

Project #:

OW/MW/SMW WELLS

Project Manager:

BRIAN MOORE (BMOORE1@MARATHONPETROLEUM.COM)

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: X Yes ☐ No

Sample Temperature: See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 19087560	Analysis Request: 8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Air Bubbles (Y or N)
8/12/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X								
8/12/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X								
8/12/2019	950	AQUEOUS	OW-29	MISC	MISC	-003	X	X		X	X ENH 8/15/19		X		
8/12/2019	1151	AQUEOUS	OW-13	MISC	MISC	-004	X	X		X	X		X		
8/12/2019	1151	AQUEOUS	DUPLICATE	MISC	MISC	-005	X	X		X	X ENH 8/15/19		X		
8/12/2019	1255	AQUEOUS	MW-1	MISC	MISC	-006	X	X	2	X	X	X		X	
8/13/2019	800	AQUEOUS	FIELD BLANK	MISC	MISC	-007	X								
8/13/2019	800	AQUEOUS	TRIP BLANK	MISC	MISC	-008	X								
8/13/2019	1300	AQUEOUS	MW-2	MISC	MISC	-009	X	X	X	X	X	X		X	
8/13/2019	1315	AQUEOUS	SMW-4	MISC	MISC	-010	X	X	X	X	X	X		X	
8/13/2019	1315	AQUEOUS	DUPLICATE	MISC	MISC	-011	X	X	X	X	X	X		X	
~~8/13/2019~~	~~1405~~	~~AQUEOUS~~	~~MW-4~~			~~-012~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	
			~~08/15/19~~												

Date: 8/13/19 Time: 1400 Relinquished by: Received by: Date: 8/13/19 Time: 1920

Date: 8/13/19 Time: 1640 Relinquished by: Received by: courier Date: 8/13/19 Time: 1640

Remarks: 1.5 - 0.1(CF) = 1.4°C ENH 8/13/19
~~5.0 - 0.1(CF) = 5.0°C~~
4.6 - 0.1(CF) = 4.5°C

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 22, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1129256

Samples Received: 08/15/2019

Project Number:

Description:

Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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1908756-006G MW-1 L1129256-01 WW

Collected by | Collected date/time 08/12/19 12:55 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332178	1	08/21/19 09:37	08/21/19 15:29	JER	Mt. Juliet, TN

1908756-009G MW-2 L1129256-02 WW

Collected by | Collected date/time 08/13/19 13:00 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332178	1	08/21/19 09:37	08/21/19 15:34	JER	Mt. Juliet, TN

1908756-010G SMW-4 L1129256-03 WW

Collected by | Collected date/time 08/13/19 13:15 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332178	1	08/21/19 09:37	08/21/19 15:36	JER	Mt. Juliet, TN

1908756-011G DUPLICATE L1129256-04 WW

Collected by | Collected date/time 08/13/19 13:15 | Received date/time 08/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1332682	1	08/21/19 22:43	08/22/19 13:44	JER	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND	J3 J6	0.00500	1	08/21/2019 15:29	WG1332178

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/21/2019 15:34	WG1332178

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/21/2019 15:36	WG1332178

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND	J3 J6	0.00500	1	08/22/2019 13:44	WG1332682

Method Blank (MB)

(MB) R3442802-1 08/21/19 15:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1129020-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1129020-02 08/21/19 15:15 • (DUP) R3442802-3 08/21/19 15:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

L1129256-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1129256-02 08/21/19 15:34 • (DUP) R3442802-8 08/21/19 15:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3442802-2 08/21/19 15:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0968	96.8	85.0-115	

L1129102-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129102-01 08/21/19 15:21 • (MS) R3442802-4 08/21/19 15:22 • (MSD) R3442802-5 08/21/19 15:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.366	0.437	0.425	71.0	59.0	1	75.0-125	E J6	E J6	2.78	20

L1129256-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129256-01 08/21/19 15:29 • (MS) R3442802-6 08/21/19 15:32 • (MSD) R3442802-7 08/21/19 15:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0831	0.0470	83.1	47.0	1	75.0-125		J3 J6	55.5	20

Method Blank (MB)

(MB) R3443227-1 08/22/19 13:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1129171-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1129171-11 08/22/19 13:39 • (DUP) R3443227-5 08/22/19 13:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	0.00243	0.00280	1	14.1	J	20

L1130585-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1130585-01 08/22/19 13:57 • (DUP) R3443227-8 08/22/19 13:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3443227-2 08/22/19 13:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.105	105	85.0-115	

L1129102-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129102-01 08/22/19 13:31 • (MS) R3443227-3 08/22/19 13:32 • (MSD) R3443227-4 08/22/19 13:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.444	0.563	0.540	119	96.0	1	75.0-125	E	E	4.17	20

L1129256-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129256-04 08/22/19 13:44 • (MS) R3443227-6 08/22/19 13:45 • (MSD) R3443227-7 08/22/19 13:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0929	0.0729	92.9	72.9	1	75.0-125		J3 J6	24.1	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

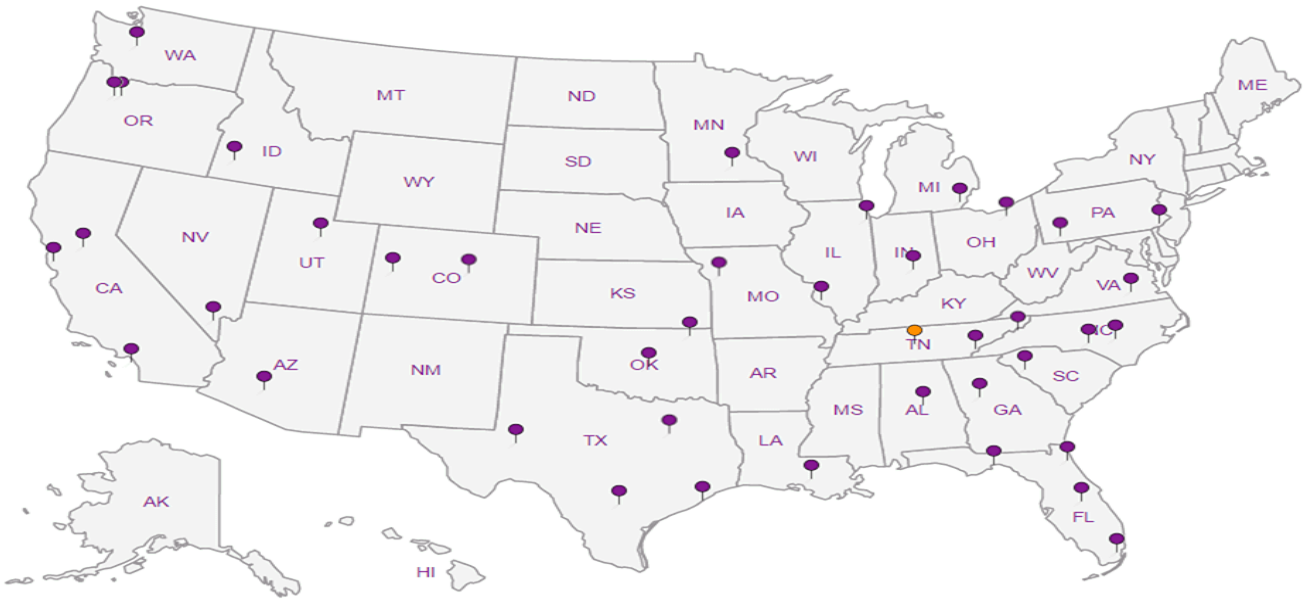
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

C249

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: **ESC PACE**	COMPANY: **ESC PACE**	PHONE: **(800) 767-5859**	FAX: **(615) 758-5859**
ADDRESS: **12065 Lebanon Rd**		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: **Mt. Juliet, TN 37122**			L1129256

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	1908756-006G	MW-1	500AMBHDP F-NAOH	Aqueous	8/12/2019 12:55:00 PM	1	Total Cyanide Lv. 4 >12	-01
2	1908756-009G	MW-2	500AMBHDP F-NAOH	Aqueous	8/13/2019 1:00:00 PM	1	Total Cyanide Lv. 4	-02
3	1908756-010G	SMW-4	500AMBHDP F-NAOH	Aqueous	8/13/2019 1:15:00 PM	1	Total Cyanide Lv. 4	-03
4	1908756-011G	Duplicate	500AMBHDP F-NAOH	Aqueous	8/13/2019 1:15:00 PM	1	Total Cyanide Lv. 4	-04

RAD SCREEN: <0.5 mR/hr

SPECIAL INSTRUCTIONS / COMMENTS: Fedex 4510 1668 8392

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 8/14/2019	Time: 10:21 AM	Received By:	Date: 8/15/19	Time: 6:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard [X] **RUSH** Next BD [ ] 2nd BD [ ] 3rd BD [ ]

REPORT TRANSMITTAL DESIRED:
[ ] HARDCOPY (extra cost) [ ] FAX [ ] EMAIL [ ] ONLINE

FOR LAB USE ONLY
Temp of samples 1.6 +0.1 -0.2 °C Attempt to Cool ? OK
Comments: COC's

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: ~~HALLA~~ HALLENIAM	SDG#:	L1120250
Cooler Received/Opened On: 8 / 15 /19	Temperature:	1.6
Received By: Adam Burns		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 16, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 Annual 3Rd QTR GW Sampling OrderNo.: 1908900

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 11 sample(s) on 8/15/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 7:00:00 AM
Lab ID: 1908900-001
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 6:57:00 PM	S62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 6:57:00 PM	S62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 6:57:00 PM	S62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 6:57:00 PM	S62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 7:00:00 AM
Lab ID: 1908900-001 **Matrix:** AQUEOUS **Received Date:** 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 6:57:00 PM	S62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 6:57:00 PM	S62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 6:57:00 PM	S62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 6:57:00 PM	S62227
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	8/19/2019 6:57:00 PM	S62227
Surr: 4-Bromofluorobenzene	97.6	0	70-130		%Rec	1	8/19/2019 6:57:00 PM	S62227
Surr: Dibromofluoromethane	99.3	0	70-130		%Rec	1	8/19/2019 6:57:00 PM	S62227
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	8/19/2019 6:57:00 PM	S62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 7:00:00 AM
Lab ID: 1908900-002
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Toluene	0.55	0.35	1.0	J	µg/L	1	8/19/2019 7:22:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 7:22:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 7:22:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 7:22:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Chlorobenzene	0.66	0.19	1.0	J	µg/L	1	8/19/2019 7:22:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 7:22:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 7:00:00 AM
Lab ID: 1908900-002
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 7:22:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 7:22:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 7:22:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 7:22:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/19/2019 7:22:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.5	0	70-130		%Rec	1	8/19/2019 7:22:00 PM	R62227
Surr: Dibromofluoromethane	99.2	0	70-130		%Rec	1	8/19/2019 7:22:00 PM	R62227
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	8/19/2019 7:22:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-4
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/13/2019 4:05:00 PM
Lab ID: 1908900-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 6:06:00 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 6:06:00 PM	46856
Surr: DNOP	107	0	70-130		%Rec	1	8/18/2019 6:06:00 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 10:01:32 AM	G62395
Surr: BFB	102	0	65.8-143		%Rec	1	8/24/2019 10:01:32 AM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.34	0.073	0.50	J	mg/L	5	8/16/2019 12:23:50 PM	R62225
Chloride	16	2.5	2.5		mg/L	5	8/16/2019 12:23:50 PM	R62225
Bromide	ND	0.089	0.50		mg/L	5	8/16/2019 12:23:50 PM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	8/16/2019 12:23:50 PM	R62225
Sulfate	160	0.33	2.5		mg/L	5	8/16/2019 12:23:50 PM	R62225
Nitrate+Nitrite as N	ND	0.048	1.0		mg/L	5	8/16/2019 12:49:34 PM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0056	0.0025	0.020	J	mg/L	1	9/3/2019 5:56:43 PM	B62619
Barium	0.021	0.00065	0.0020		mg/L	1	9/3/2019 5:56:43 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 5:56:43 PM	B62619
Boron	0.38	0.0045	0.040		mg/L	1	9/3/2019 5:56:43 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 5:56:43 PM	B62619
Calcium	1.8	0.062	1.0		mg/L	1	9/3/2019 5:56:43 PM	B62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 5:56:43 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 5:56:43 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 5:56:43 PM	B62619
Iron	ND	0.0087	0.020		mg/L	1	9/3/2019 5:56:43 PM	B62619
Magnesium	0.20	0.050	1.0	J	mg/L	1	9/3/2019 5:56:43 PM	B62619
Manganese	0.0052	0.00029	0.0020		mg/L	1	9/3/2019 5:56:43 PM	B62619
Molybdenum	0.0097	0.0067	0.0080		mg/L	1	9/3/2019 5:56:43 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 5:56:43 PM	B62619
Potassium	0.75	0.16	1.0	J	mg/L	1	9/3/2019 5:56:43 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 5:56:43 PM	B62619
Sodium	310	2.1	5.0		mg/L	5	9/6/2019 3:37:10 PM	B62735
Zinc	0.0066	0.0023	0.010	J	mg/L	1	9/3/2019 5:56:43 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.011	0.0025	0.020	J	mg/L	1	8/26/2019 2:38:58 PM	A62442
Barium	0.021	0.00065	0.0020		mg/L	1	8/26/2019 2:38:58 PM	A62442
Beryllium	ND	0.00028	0.0020		mg/L	1	8/26/2019 2:38:58 PM	A62442
Boron	0.38	0.0045	0.040		mg/L	1	8/26/2019 2:38:58 PM	A62442

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-4
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/13/2019 4:05:00 PM
Lab ID: 1908900-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/26/2019 2:38:58 PM	A62442
Chromium	ND	0.0015	0.0060		mg/L	1	8/26/2019 2:38:58 PM	A62442
Cobalt	ND	0.0031	0.0060		mg/L	1	8/26/2019 2:38:58 PM	A62442
Copper	ND	0.0041	0.0060		mg/L	1	8/26/2019 2:38:58 PM	A62442
Iron	ND	0.0087	0.020		mg/L	1	8/26/2019 2:38:58 PM	A62442
Manganese	0.0056	0.00029	0.0020		mg/L	1	8/26/2019 2:38:58 PM	A62442
Molybdenum	0.0081	0.0067	0.0080		mg/L	1	8/26/2019 2:38:58 PM	A62442
Nickel	ND	0.0040	0.010		mg/L	1	8/26/2019 2:38:58 PM	A62442
Silver	ND	0.0014	0.0050		mg/L	1	8/26/2019 2:38:58 PM	A62442
Zinc	ND	0.0058	0.010		mg/L	1	8/26/2019 2:38:58 PM	A62442
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 10:31:26 PM	C62319
Arsenic	0.00078	0.00010	0.0010	J	mg/L	1	8/21/2019 10:31:26 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 10:31:26 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 10:31:26 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 10:31:26 PM	C62319
Uranium	0.014	0.000075	0.00050		mg/L	1	8/21/2019 10:31:26 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/20/2019 7:25:03 PM	C62284
Arsenic	0.00071	0.00031	0.0010	J	mg/L	1	8/20/2019 7:25:03 PM	C62284
Lead	ND	0.000055	0.00050		mg/L	1	8/20/2019 7:25:03 PM	C62284
Selenium	ND	0.00048	0.0010		mg/L	1	8/21/2019 11:33:37 PM	D62319
Thallium	ND	0.000052	0.00050		mg/L	1	8/20/2019 7:25:03 PM	C62284
Uranium	0.013	0.000085	0.00050		mg/L	1	8/21/2019 11:33:37 PM	D62319
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:25:52 PM	47219
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Acenaphthylene	ND	2.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Aniline	ND	3.6	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Anthracene	ND	2.7	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Azobenzene	ND	3.3	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/20/2019 6:49:36 PM	46870

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-4
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/13/2019 4:05:00 PM
Lab ID: 1908900-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/20/2019 6:49:36 PM	46870
Benzyl alcohol	ND	2.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/20/2019 6:49:36 PM	46870
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Carbazole	ND	2.9	10		µg/L	1	8/20/2019 6:49:36 PM	46870
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
4-Chloroaniline	ND	2.3	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2-Chlorophenol	ND	2.7	10		µg/L	1	8/20/2019 6:49:36 PM	46870
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Chrysene	ND	2.8	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Dibenzofuran	ND	3.2	10		µg/L	1	8/20/2019 6:49:36 PM	46870
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/20/2019 6:49:36 PM	46870
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/20/2019 6:49:36 PM	46870
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Diethyl phthalate	ND	2.9	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/20/2019 6:49:36 PM	46870
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/20/2019 6:49:36 PM	46870
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/20/2019 6:49:36 PM	46870
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Fluoranthene	ND	2.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Fluorene	ND	2.9	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Hexachloroethane	ND	4.8	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Isophorone	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-4
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/13/2019 4:05:00 PM
Lab ID: 1908900-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2-Methylphenol	ND	2.9	10		µg/L	1	8/20/2019 6:49:36 PM	46870
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/20/2019 6:49:36 PM	46870
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/20/2019 6:49:36 PM	46870
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Naphthalene	ND	4.1	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2-Nitroaniline	ND	3.2	10		µg/L	1	8/20/2019 6:49:36 PM	46870
3-Nitroaniline	ND	3.2	10		µg/L	1	8/20/2019 6:49:36 PM	46870
4-Nitroaniline	ND	2.7	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Nitrobenzene	ND	2.8	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2-Nitrophenol	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
4-Nitrophenol	ND	7.6	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Pentachlorophenol	ND	2.7	20		µg/L	1	8/20/2019 6:49:36 PM	46870
Phenanthrene	ND	2.8	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Phenol	ND	8.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Pyrene	ND	2.5	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Pyridine	ND	9.6	10		µg/L	1	8/20/2019 6:49:36 PM	46870
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/20/2019 6:49:36 PM	46870
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/20/2019 6:49:36 PM	46870
Surr: 2-Fluorophenol	60.8	0	15-101		%Rec	1	8/20/2019 6:49:36 PM	46870
Surr: Phenol-d5	43.5	0	15-84.6		%Rec	1	8/20/2019 6:49:36 PM	46870
Surr: 2,4,6-Tribromophenol	69.2	0	27.8-112		%Rec	1	8/20/2019 6:49:36 PM	46870
Surr: Nitrobenzene-d5	88.5	0	33-113		%Rec	1	8/20/2019 6:49:36 PM	46870
Surr: 2-Fluorobiphenyl	75.2	0	26.6-107		%Rec	1	8/20/2019 6:49:36 PM	46870
Surr: 4-Terphenyl-d14	84.7	0	18.7-148		%Rec	1	8/20/2019 6:49:36 PM	46870
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 7:46:00 PM	R62227

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-4
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/13/2019 4:05:00 PM
Lab ID: 1908900-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 7:46:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 7:46:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 7:46:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 7:46:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 7:46:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-4
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/13/2019 4:05:00 PM
Lab ID: 1908900-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 7:46:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 7:46:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/19/2019 7:46:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.2	0	70-130		%Rec	1	8/19/2019 7:46:00 PM	R62227
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	8/19/2019 7:46:00 PM	R62227
Surr: Toluene-d8	97.8	0	70-130		%Rec	1	8/19/2019 7:46:00 PM	R62227

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-1C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 9:52:00 AM
Lab ID: 1908900-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 6:30:33 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 6:30:33 PM	46856
Surr: DNOP	97.2	0	70-130		%Rec	1	8/18/2019 6:30:33 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 10:24:18 AM	G62395
Surr: BFB	101	0	65.8-143		%Rec	1	8/24/2019 10:24:18 AM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.2	0.073	0.50		mg/L	5	8/28/2019 11:38:26 AM	R62484
Chloride	33	2.5	2.5		mg/L	5	8/16/2019 9:02:02 AM	A62192
Nitrogen, Nitrite (As N)	0.066	0.027	0.50	J	mg/L	5	8/16/2019 9:02:02 AM	A62192
Bromide	0.15	0.089	0.50	J	mg/L	5	8/16/2019 9:02:02 AM	A62192
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 9:02:02 AM	A62192
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 9:02:02 AM	A62192
Sulfate	250	1.3	10		mg/L	20	8/16/2019 9:14:23 AM	A62192
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.020	0.0025	0.020		mg/L	1	9/3/2019 5:58:41 PM	B62619
Barium	0.017	0.00065	0.0020		mg/L	1	9/3/2019 5:58:41 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 5:58:41 PM	B62619
Boron	1.6	0.023	0.20		mg/L	5	9/3/2019 6:55:17 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 5:58:41 PM	B62619
Calcium	2.9	0.062	1.0		mg/L	1	9/3/2019 5:58:41 PM	B62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 5:58:41 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 5:58:41 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 5:58:41 PM	B62619
Iron	0.022	0.0087	0.020		mg/L	1	9/3/2019 5:58:41 PM	B62619
Magnesium	0.39	0.050	1.0	J	mg/L	1	9/3/2019 5:58:41 PM	B62619
Manganese	0.0080	0.00029	0.0020		mg/L	1	9/3/2019 5:58:41 PM	B62619
Molybdenum	0.012	0.0067	0.0080		mg/L	1	9/3/2019 5:58:41 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 5:58:41 PM	B62619
Potassium	0.83	0.16	1.0	J	mg/L	1	9/3/2019 5:58:41 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 5:58:41 PM	B62619
Sodium	340	2.1	5.0		mg/L	5	9/6/2019 3:39:19 PM	B62735
Zinc	0.011	0.0023	0.010		mg/L	1	9/3/2019 5:58:41 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.10	0.0025	0.020		mg/L	1	8/26/2019 2:40:53 PM	A62442
Barium	0.019	0.00065	0.0020		mg/L	1	8/26/2019 2:40:53 PM	A62442
Beryllium	ND	0.00028	0.0020		mg/L	1	8/26/2019 2:40:53 PM	A62442

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-1C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 9:52:00 AM
Lab ID: 1908900-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.7	0.023	0.20		mg/L	5	8/26/2019 3:12:34 PM	A62442
Cadmium	ND	0.00074	0.0020		mg/L	1	8/26/2019 2:40:53 PM	A62442
Chromium	0.0026	0.0015	0.0060	J	mg/L	1	8/26/2019 2:40:53 PM	A62442
Cobalt	ND	0.0031	0.0060		mg/L	1	8/26/2019 2:40:53 PM	A62442
Copper	ND	0.0041	0.0060		mg/L	1	8/26/2019 2:40:53 PM	A62442
Iron	0.054	0.0087	0.020		mg/L	1	8/26/2019 2:40:53 PM	A62442
Manganese	0.010	0.00029	0.0020		mg/L	1	8/26/2019 2:40:53 PM	A62442
Molybdenum	0.012	0.0067	0.0080		mg/L	1	8/26/2019 2:40:53 PM	A62442
Nickel	ND	0.0040	0.010		mg/L	1	8/26/2019 2:40:53 PM	A62442
Silver	ND	0.0014	0.0050		mg/L	1	8/26/2019 2:40:53 PM	A62442
Zinc	ND	0.0058	0.010		mg/L	1	8/26/2019 2:40:53 PM	A62442
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00046	0.00039	0.0010	J	mg/L	1	8/21/2019 10:45:00 PM	C62319
Arsenic	0.00015	0.00010	0.0010	J	mg/L	1	8/21/2019 10:45:00 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 10:45:00 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 10:45:00 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 10:45:00 PM	C62319
Uranium	0.0078	0.000075	0.00050		mg/L	1	8/21/2019 10:45:00 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/20/2019 7:27:46 PM	C62284
Arsenic	ND	0.00031	0.0010		mg/L	1	8/20/2019 7:27:46 PM	C62284
Lead	ND	0.000055	0.00050		mg/L	1	8/20/2019 7:27:46 PM	C62284
Selenium	ND	0.00048	0.0010		mg/L	1	8/21/2019 11:36:18 PM	D62319
Thallium	ND	0.000052	0.00050		mg/L	1	8/20/2019 7:27:46 PM	C62284
Uranium	0.0094	0.00042	0.0025		mg/L	5	8/28/2019 7:51:42 PM	C62501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:32:32 PM	47219
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 8:11:00 PM	R62227

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-1C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 9:52:00 AM
Lab ID: 1908900-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 8:11:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 8:11:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 8:11:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 8:11:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 8:11:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-1C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 9:52:00 AM
Lab ID: 1908900-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 8:11:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 8:11:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	8/19/2019 8:11:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.8	0	70-130		%Rec	1	8/19/2019 8:11:00 PM	R62227
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	8/19/2019 8:11:00 PM	R62227
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	8/19/2019 8:11:00 PM	R62227

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2B
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 10:42:00 AM
Lab ID: 1908900-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 6:55:08 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 6:55:08 PM	46856
Surr: DNOP	103	0	70-130		%Rec	1	8/18/2019 6:55:08 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 10:47:11 AM	G62395
Surr: BFB	103	0	65.8-143		%Rec	1	8/24/2019 10:47:11 AM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.5	0.073	0.50		mg/L	5	8/28/2019 11:50:50 AM	R62484
Chloride	31	2.5	2.5		mg/L	5	8/16/2019 9:26:43 AM	A62192
Nitrogen, Nitrite (As N)	0.068	0.027	0.50	J	mg/L	5	8/16/2019 9:26:43 AM	A62192
Bromide	0.71	0.089	0.50		mg/L	5	8/16/2019 9:26:43 AM	A62192
Nitrogen, Nitrate (As N)	0.065	0.025	0.50	J	mg/L	5	8/16/2019 9:26:43 AM	A62192
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 9:26:43 AM	A62192
Sulfate	200	0.33	2.5		mg/L	5	8/16/2019 9:26:43 AM	A62192
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.051	0.0025	0.020		mg/L	1	9/3/2019 6:00:40 PM	B62619
Barium	0.039	0.00065	0.0020		mg/L	1	9/3/2019 6:00:40 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 6:00:40 PM	B62619
Boron	1.7	0.023	0.20		mg/L	5	9/3/2019 6:57:08 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 6:00:40 PM	B62619
Calcium	12	0.062	1.0		mg/L	1	9/3/2019 6:00:40 PM	B62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 6:00:40 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 6:00:40 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 6:00:40 PM	B62619
Iron	0.13	0.0087	0.020		mg/L	1	9/3/2019 6:00:40 PM	B62619
Magnesium	2.9	0.050	1.0		mg/L	1	9/3/2019 6:00:40 PM	B62619
Manganese	0.15	0.00029	0.0020	*	mg/L	1	9/3/2019 6:00:40 PM	B62619
Molybdenum	0.022	0.0067	0.0080		mg/L	1	9/3/2019 6:00:40 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 6:00:40 PM	B62619
Potassium	1.1	0.16	1.0		mg/L	1	9/3/2019 6:00:40 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 6:00:40 PM	B62619
Sodium	620	4.2	10		mg/L	10	9/6/2019 3:47:43 PM	B62735
Zinc	0.0080	0.0023	0.010	J	mg/L	1	9/3/2019 6:00:40 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	4.5	0.012	0.10	*	mg/L	5	8/20/2019 5:07:40 PM	46881
Barium	0.057	0.00065	0.0020		mg/L	1	8/20/2019 3:55:08 PM	46881
Beryllium	ND	0.00028	0.0020		mg/L	1	8/20/2019 3:55:08 PM	46881

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2B
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 10:42:00 AM
Lab ID: 1908900-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.9	0.023	0.20		mg/L	5	8/20/2019 5:07:40 PM	46881
Cadmium	ND	0.00074	0.0020		mg/L	1	8/20/2019 3:55:08 PM	46881
Chromium	0.0027	0.0015	0.0060	J	mg/L	1	8/20/2019 3:55:08 PM	46881
Cobalt	ND	0.0031	0.0060		mg/L	1	8/20/2019 3:55:08 PM	46881
Copper	ND	0.0041	0.0060		mg/L	1	8/20/2019 3:55:08 PM	46881
Iron	1.6	0.044	0.10	*	mg/L	5	8/20/2019 5:07:40 PM	46881
Manganese	0.18	0.00029	0.0020	*	mg/L	1	8/20/2019 3:55:08 PM	46881
Molybdenum	0.020	0.0067	0.0080		mg/L	1	8/20/2019 3:55:08 PM	46881
Nickel	ND	0.0040	0.010		mg/L	1	8/20/2019 3:55:08 PM	46881
Silver	ND	0.0014	0.0050		mg/L	1	8/20/2019 3:55:08 PM	46881
Zinc	0.011	0.0058	0.010		mg/L	1	8/20/2019 3:55:08 PM	46881
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 10:47:43 PM	C62319
Arsenic	0.00074	0.00010	0.0010	J	mg/L	1	8/21/2019 10:47:43 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 10:47:43 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 10:47:43 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 10:47:43 PM	C62319
Uranium	0.010	0.000075	0.00050		mg/L	1	8/21/2019 10:47:43 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/19/2019 7:03:08 PM	46881
Arsenic	0.00098	0.00031	0.0010	J	mg/L	1	8/19/2019 7:03:08 PM	46881
Lead	0.00092	0.000055	0.00050		mg/L	1	8/19/2019 7:03:08 PM	46881
Selenium	ND	0.00048	0.0010		mg/L	1	8/19/2019 7:03:08 PM	46881
Thallium	ND	0.000052	0.00050		mg/L	1	8/19/2019 7:03:08 PM	46881
Uranium	0.012	0.000085	0.00050		mg/L	1	8/19/2019 7:03:08 PM	46881
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:34:46 PM	47219
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 8:35:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2B
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 10:42:00 AM
Lab ID: 1908900-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 8:35:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 8:35:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 8:35:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 8:35:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 8:35:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2B
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 10:42:00 AM
Lab ID: 1908900-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 8:35:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 8:35:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/19/2019 8:35:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.1	0	70-130		%Rec	1	8/19/2019 8:35:00 PM	R62227
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	8/19/2019 8:35:00 PM	R62227
Surr: Toluene-d8	96.4	0	70-130		%Rec	1	8/19/2019 8:35:00 PM	R62227

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*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2A
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 7:19:38 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 7:19:38 PM	46856
Surr: DNOP	105	0	70-130		%Rec	1	8/18/2019 7:19:38 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 11:10:03 AM	G62395
Surr: BFB	103	0	65.8-143		%Rec	1	8/24/2019 11:10:03 AM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.1	0.073	0.50		mg/L	5	8/16/2019 9:23:44 AM	R62225
Chloride	38	2.5	2.5		mg/L	5	8/16/2019 9:23:44 AM	R62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 9:23:44 AM	R62225
Bromide	0.46	0.089	0.50	J	mg/L	5	8/16/2019 9:23:44 AM	R62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 9:23:44 AM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 9:23:44 AM	R62225
Sulfate	6.8	0.33	2.5		mg/L	5	8/16/2019 9:23:44 AM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0046	0.0025	0.020	J	mg/L	1	9/3/2019 6:02:44 PM	B62619
Barium	0.14	0.00065	0.0020		mg/L	1	9/3/2019 6:02:44 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 6:02:44 PM	B62619
Boron	0.80	0.0045	0.040		mg/L	1	9/3/2019 6:02:44 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 6:02:44 PM	B62619
Calcium	8.6	0.062	1.0		mg/L	1	9/3/2019 6:02:44 PM	B62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 6:02:44 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 6:02:44 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 6:02:44 PM	B62619
Iron	0.32	0.0087	0.020	*	mg/L	1	9/3/2019 6:02:44 PM	B62619
Magnesium	3.2	0.050	1.0		mg/L	1	9/3/2019 6:02:44 PM	B62619
Manganese	0.13	0.00029	0.0020	*	mg/L	1	9/3/2019 6:02:44 PM	B62619
Molybdenum	0.0081	0.0067	0.0080		mg/L	1	9/3/2019 6:02:44 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 6:02:44 PM	B62619
Potassium	0.30	0.16	1.0	J	mg/L	1	9/3/2019 6:02:44 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 6:02:44 PM	B62619
Sodium	370	2.1	5.0		mg/L	5	9/6/2019 3:49:41 PM	B62735
Zinc	0.0094	0.0023	0.010	J	mg/L	1	9/3/2019 6:02:44 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.27	0.0025	0.020	*	mg/L	1	8/20/2019 3:57:00 PM	46881
Barium	0.15	0.00065	0.0020		mg/L	1	8/20/2019 3:57:00 PM	46881
Beryllium	ND	0.00028	0.0020		mg/L	1	8/20/2019 3:57:00 PM	46881

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2A
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.85	0.0045	0.040		mg/L	1	8/20/2019 3:57:00 PM	46881
Cadmium	ND	0.00074	0.0020		mg/L	1	8/20/2019 3:57:00 PM	46881
Chromium	ND	0.0015	0.0060		mg/L	1	8/20/2019 3:57:00 PM	46881
Cobalt	ND	0.0031	0.0060		mg/L	1	8/20/2019 3:57:00 PM	46881
Copper	ND	0.0041	0.0060		mg/L	1	8/20/2019 3:57:00 PM	46881
Iron	0.49	0.0087	0.020	*	mg/L	1	8/20/2019 3:57:00 PM	46881
Manganese	0.15	0.00029	0.0020	*	mg/L	1	8/20/2019 3:57:00 PM	46881
Molybdenum	0.0083	0.0067	0.0080		mg/L	1	8/20/2019 3:57:00 PM	46881
Nickel	ND	0.0040	0.010		mg/L	1	8/20/2019 3:57:00 PM	46881
Silver	ND	0.0014	0.0050		mg/L	1	8/20/2019 3:57:00 PM	46881
Zinc	ND	0.0058	0.010		mg/L	1	8/20/2019 3:57:00 PM	46881
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 10:50:25 PM	C62319
Arsenic	0.0083	0.00010	0.0010		mg/L	1	8/21/2019 10:50:25 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 10:50:25 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 10:50:25 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 10:50:25 PM	C62319
Uranium	0.000079	0.000075	0.00050	J	mg/L	1	8/21/2019 10:50:25 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/19/2019 7:05:20 PM	46881
Arsenic	0.0085	0.00031	0.0010		mg/L	1	8/19/2019 7:05:20 PM	46881
Lead	0.00012	0.000055	0.00050	J	mg/L	1	8/19/2019 7:05:20 PM	46881
Selenium	ND	0.00048	0.0010		mg/L	1	8/19/2019 7:05:20 PM	46881
Thallium	ND	0.000052	0.00050		mg/L	1	8/19/2019 7:05:20 PM	46881
Uranium	ND	0.000085	0.00050		mg/L	1	8/19/2019 7:05:20 PM	46881
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:37:02 PM	47219
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 8:59:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2A
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 8:59:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 8:59:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 8:59:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 8:59:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 8:59:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2A
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 8:59:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 8:59:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/19/2019 8:59:00 PM	R62227
Surr: 4-Bromofluorobenzene	96.4	0	70-130		%Rec	1	8/19/2019 8:59:00 PM	R62227
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	8/19/2019 8:59:00 PM	R62227
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	8/19/2019 8:59:00 PM	R62227

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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-007
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 8:08:36 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 8:08:36 PM	46856
Surr: DNOP	99.5	0	70-130		%Rec	1	8/18/2019 8:08:36 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 11:32:54 AM	G62395
Surr: BFB	102	0	65.8-143		%Rec	1	8/24/2019 11:32:54 AM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.1	0.073	0.50		mg/L	5	8/16/2019 9:49:27 AM	R62225
Chloride	38	2.5	2.5		mg/L	5	8/16/2019 9:49:27 AM	R62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 9:49:27 AM	R62225
Bromide	0.44	0.089	0.50	J	mg/L	5	8/16/2019 9:49:27 AM	R62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 9:49:27 AM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 9:49:27 AM	R62225
Sulfate	6.7	0.33	2.5		mg/L	5	8/16/2019 9:49:27 AM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/3/2019 6:04:46 PM	B62619
Barium	0.14	0.00065	0.0020		mg/L	1	9/3/2019 6:04:46 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 6:04:46 PM	B62619
Boron	0.78	0.0045	0.040		mg/L	1	9/3/2019 6:04:46 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 6:04:46 PM	B62619
Calcium	8.6	0.062	1.0		mg/L	1	9/3/2019 6:04:46 PM	B62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 6:04:46 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 6:04:46 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 6:04:46 PM	B62619
Iron	0.30	0.0087	0.020		mg/L	1	9/3/2019 6:04:46 PM	B62619
Magnesium	3.2	0.050	1.0		mg/L	1	9/3/2019 6:04:46 PM	B62619
Manganese	0.13	0.00029	0.0020	*	mg/L	1	9/3/2019 6:04:46 PM	B62619
Molybdenum	0.0082	0.0067	0.0080		mg/L	1	9/3/2019 6:04:46 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 6:04:46 PM	B62619
Potassium	0.33	0.16	1.0	J	mg/L	1	9/3/2019 6:04:46 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 6:04:46 PM	B62619
Sodium	370	2.1	5.0		mg/L	5	9/6/2019 3:51:38 PM	B62735
Zinc	0.012	0.0023	0.010		mg/L	1	9/3/2019 6:04:46 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.23	0.0025	0.020	*	mg/L	1	8/20/2019 3:59:04 PM	46881
Barium	0.14	0.00065	0.0020		mg/L	1	8/20/2019 3:59:04 PM	46881
Beryllium	ND	0.00028	0.0020		mg/L	1	8/20/2019 3:59:04 PM	46881

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-007
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.80	0.0045	0.040		mg/L	1	8/20/2019 3:59:04 PM	46881
Cadmium	ND	0.00074	0.0020		mg/L	1	8/20/2019 3:59:04 PM	46881
Chromium	ND	0.0015	0.0060		mg/L	1	8/20/2019 3:59:04 PM	46881
Cobalt	ND	0.0031	0.0060		mg/L	1	8/20/2019 3:59:04 PM	46881
Copper	ND	0.0041	0.0060		mg/L	1	8/20/2019 3:59:04 PM	46881
Iron	0.46	0.0087	0.020	*	mg/L	1	8/20/2019 3:59:04 PM	46881
Manganese	0.14	0.00029	0.0020	*	mg/L	1	8/20/2019 3:59:04 PM	46881
Molybdenum	0.0071	0.0067	0.0080	J	mg/L	1	8/20/2019 3:59:04 PM	46881
Nickel	ND	0.0040	0.010		mg/L	1	8/20/2019 3:59:04 PM	46881
Silver	ND	0.0014	0.0050		mg/L	1	8/20/2019 3:59:04 PM	46881
Zinc	ND	0.0058	0.010		mg/L	1	8/20/2019 3:59:04 PM	46881
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 10:53:06 PM	C62319
Arsenic	0.0083	0.00010	0.0010		mg/L	1	8/21/2019 10:53:06 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 10:53:06 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 10:53:06 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 10:53:06 PM	C62319
Uranium	ND	0.000075	0.00050		mg/L	1	8/21/2019 10:53:06 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/19/2019 7:07:31 PM	46881
Arsenic	0.0083	0.00031	0.0010		mg/L	1	8/19/2019 7:07:31 PM	46881
Lead	0.00010	0.000055	0.00050	J	mg/L	1	8/19/2019 7:07:31 PM	46881
Selenium	ND	0.00048	0.0010		mg/L	1	8/19/2019 7:07:31 PM	46881
Thallium	ND	0.000052	0.00050		mg/L	1	8/19/2019 7:07:31 PM	46881
Uranium	ND	0.000085	0.00050		mg/L	1	8/19/2019 7:07:31 PM	46881
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:39:17 PM	47219
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 9:23:00 PM	R62227

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-007
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 9:23:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 9:23:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 9:23:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 9:23:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 9:23:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 11:11:00 AM
Lab ID: 1908900-007
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 9:23:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 9:23:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/19/2019 9:23:00 PM	R62227
Surr: 4-Bromofluorobenzene	95.3	0	70-130		%Rec	1	8/19/2019 9:23:00 PM	R62227
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	8/19/2019 9:23:00 PM	R62227
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	8/19/2019 9:23:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 12:16:00 PM
Lab ID: 1908900-008
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 8:33:04 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 8:33:04 PM	46856
Surr: DNOP	112	0	70-130		%Rec	1	8/18/2019 8:33:04 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 11:55:46 AM	G62395
Surr: BFB	99.8	0	65.8-143		%Rec	1	8/24/2019 11:55:46 AM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.8	0.073	0.50		mg/L	5	8/16/2019 10:15:11 AM	R62225
Chloride	46	2.5	2.5		mg/L	5	8/16/2019 10:15:11 AM	R62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 10:15:11 AM	R62225
Bromide	ND	0.089	0.50		mg/L	5	8/16/2019 10:15:11 AM	R62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 10:15:11 AM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 10:15:11 AM	R62225
Sulfate	260	1.3	10		mg/L	20	8/16/2019 10:28:03 AM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.51	0.0025	0.020	*	mg/L	1	9/3/2019 6:13:13 PM	B62619
Barium	0.019	0.00065	0.0020		mg/L	1	9/3/2019 6:13:13 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 6:13:13 PM	B62619
Boron	1.1	0.023	0.20		mg/L	5	9/3/2019 7:12:23 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 6:13:13 PM	B62619
Calcium	2.1	0.062	1.0		mg/L	1	9/3/2019 6:13:13 PM	B62619
Chromium	0.0031	0.0015	0.0060	J	mg/L	1	9/3/2019 6:13:13 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 6:13:13 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 6:13:13 PM	B62619
Iron	0.16	0.0087	0.020		mg/L	1	9/3/2019 6:13:13 PM	B62619
Magnesium	0.44	0.050	1.0	J	mg/L	1	9/3/2019 6:13:13 PM	B62619
Manganese	0.012	0.00029	0.0020		mg/L	1	9/3/2019 6:13:13 PM	B62619
Molybdenum	0.015	0.0067	0.0080		mg/L	1	9/3/2019 6:13:13 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 6:13:13 PM	B62619
Potassium	0.68	0.16	1.0	J	mg/L	1	9/3/2019 6:13:13 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 6:13:13 PM	B62619
Sodium	340	2.1	5.0		mg/L	5	9/6/2019 3:53:35 PM	B62735
Zinc	0.0098	0.0023	0.010	J	mg/L	1	9/3/2019 6:13:13 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	12	0.050	0.40	*	mg/L	20	8/20/2019 5:11:25 PM	46881
Barium	0.086	0.00065	0.0020		mg/L	1	8/20/2019 4:01:03 PM	46881
Beryllium	0.00032	0.00028	0.0020	J	mg/L	1	8/20/2019 4:01:03 PM	46881

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 12:16:00 PM
Lab ID: 1908900-008
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.2	0.023	0.20		mg/L	5	8/20/2019 5:09:41 PM	46881
Cadmium	ND	0.00074	0.0020		mg/L	1	8/20/2019 4:01:03 PM	46881
Chromium	0.018	0.0015	0.0060		mg/L	1	8/20/2019 4:01:03 PM	46881
Cobalt	ND	0.0031	0.0060		mg/L	1	8/20/2019 4:01:03 PM	46881
Copper	ND	0.0041	0.0060		mg/L	1	8/20/2019 4:01:03 PM	46881
Iron	3.9	0.044	0.10	*	mg/L	5	8/20/2019 5:09:41 PM	46881
Manganese	0.096	0.00029	0.0020	*	mg/L	1	8/20/2019 4:01:03 PM	46881
Molybdenum	0.0088	0.0067	0.0080		mg/L	1	8/20/2019 4:01:03 PM	46881
Nickel	0.012	0.0040	0.010		mg/L	1	8/20/2019 4:01:03 PM	46881
Silver	ND	0.0014	0.0050		mg/L	1	8/20/2019 4:01:03 PM	46881
Zinc	0.024	0.0058	0.010		mg/L	1	8/20/2019 4:01:03 PM	46881
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 10:55:48 PM	C62319
Arsenic	0.00087	0.00010	0.0010	J	mg/L	1	8/21/2019 10:55:48 PM	C62319
Lead	0.00019	0.000055	0.00050	J	mg/L	1	8/21/2019 10:55:48 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 10:55:48 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 10:55:48 PM	C62319
Uranium	0.0054	0.000075	0.00050		mg/L	1	8/21/2019 10:55:48 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/19/2019 7:09:43 PM	46881
Arsenic	0.0023	0.00031	0.0010		mg/L	1	8/19/2019 7:09:43 PM	46881
Lead	0.0044	0.000055	0.00050		mg/L	1	8/19/2019 7:09:43 PM	46881
Selenium	0.00077	0.00048	0.0010	J	mg/L	1	8/19/2019 7:09:43 PM	46881
Thallium	0.00040	0.000052	0.00050	J	mg/L	1	8/19/2019 7:09:43 PM	46881
Uranium	0.0072	0.000085	0.00050		mg/L	1	8/19/2019 7:09:43 PM	46881
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:41:33 PM	47219
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Toluene	ND	0.35	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Naphthalene	ND	0.28	2.0		µg/L	1	8/19/2019 9:48:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 12:16:00 PM
Lab ID: 1908900-008
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Acetone	ND	1.2	10		µg/L	1	8/19/2019 9:48:00 PM	R62227
Bromobenzene	ND	0.24	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Bromoform	ND	0.29	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Bromomethane	ND	0.27	3.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
2-Butanone	ND	2.1	10		µg/L	1	8/19/2019 9:48:00 PM	R62227
Carbon disulfide	ND	0.45	10		µg/L	1	8/19/2019 9:48:00 PM	R62227
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Chloroethane	ND	0.18	2.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Chloroform	ND	0.12	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Chloromethane	ND	0.32	3.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Dibromomethane	ND	0.21	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
2-Hexanone	ND	1.5	10		µg/L	1	8/19/2019 9:48:00 PM	R62227
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/19/2019 9:48:00 PM	R62227
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-2C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 12:16:00 PM
Lab ID: 1908900-008
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Styrene	ND	0.19	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/19/2019 9:48:00 PM	R62227
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/19/2019 9:48:00 PM	R62227
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/19/2019 9:48:00 PM	R62227
Surr: 4-Bromofluorobenzene	97.0	0	70-130		%Rec	1	8/19/2019 9:48:00 PM	R62227
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	8/19/2019 9:48:00 PM	R62227
Surr: Toluene-d8	98.5	0	70-130		%Rec	1	8/19/2019 9:48:00 PM	R62227

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 1:45:00 PM
Lab ID: 1908900-009
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 8:57:41 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 8:57:41 PM	46856
Surr: DNOP	105	0	70-130		%Rec	1	8/18/2019 8:57:41 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 12:18:36 PM	G62395
Surr: BFB	101	0	65.8-143		%Rec	1	8/24/2019 12:18:36 PM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.5	0.073	0.50		mg/L	5	8/16/2019 11:06:39 AM	R62225
Chloride	36	2.5	2.5		mg/L	5	8/16/2019 11:06:39 AM	R62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 11:06:39 AM	R62225
Bromide	ND	0.089	0.50		mg/L	5	8/16/2019 11:06:39 AM	R62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 11:06:39 AM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 11:06:39 AM	R62225
Sulfate	330	1.3	10		mg/L	20	8/16/2019 11:19:31 AM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.40	0.0025	0.020	*	mg/L	1	9/3/2019 6:15:13 PM	B62619
Barium	0.029	0.00065	0.0020		mg/L	1	9/3/2019 6:15:13 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 6:15:13 PM	B62619
Boron	0.97	0.023	0.20		mg/L	5	9/3/2019 7:14:14 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 6:15:13 PM	B62619
Calcium	3.2	0.062	1.0		mg/L	1	9/3/2019 6:15:13 PM	B62619
Chromium	0.0024	0.0015	0.0060	J	mg/L	1	9/3/2019 6:15:13 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 6:15:13 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 6:15:13 PM	B62619
Iron	0.12	0.0087	0.020		mg/L	1	9/3/2019 6:15:13 PM	B62619
Magnesium	0.53	0.050	1.0	J	mg/L	1	9/3/2019 6:15:13 PM	B62619
Manganese	0.017	0.00029	0.0020		mg/L	1	9/3/2019 6:15:13 PM	B62619
Molybdenum	0.015	0.0067	0.0080		mg/L	1	9/3/2019 6:15:13 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 6:15:13 PM	B62619
Potassium	0.91	0.16	1.0	J	mg/L	1	9/3/2019 6:15:13 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 6:15:13 PM	B62619
Sodium	380	2.1	5.0		mg/L	5	9/6/2019 3:55:31 PM	B62735
Zinc	0.0078	0.0023	0.010	J	mg/L	1	9/3/2019 6:15:13 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.6	0.025	0.20	*	mg/L	10	8/20/2019 5:15:41 PM	46881
Barium	0.080	0.00065	0.0020		mg/L	1	8/20/2019 4:02:48 PM	46881
Beryllium	ND	0.00028	0.0020		mg/L	1	8/20/2019 4:02:48 PM	46881

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 1:45:00 PM
Lab ID: 1908900-009
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.0	0.023	0.20		mg/L	5	8/20/2019 5:13:39 PM	46881
Cadmium	ND	0.00074	0.0020		mg/L	1	8/20/2019 4:02:48 PM	46881
Chromium	0.016	0.0015	0.0060		mg/L	1	8/20/2019 4:02:48 PM	46881
Cobalt	ND	0.0031	0.0060		mg/L	1	8/20/2019 4:02:48 PM	46881
Copper	0.0041	0.0041	0.0060	J	mg/L	1	8/20/2019 4:02:48 PM	46881
Iron	1.7	0.044	0.10	*	mg/L	5	8/20/2019 5:13:39 PM	46881
Manganese	0.056	0.00029	0.0020	*	mg/L	1	8/20/2019 4:02:48 PM	46881
Molybdenum	0.013	0.0067	0.0080		mg/L	1	8/20/2019 4:02:48 PM	46881
Nickel	0.011	0.0040	0.010		mg/L	1	8/20/2019 4:02:48 PM	46881
Silver	0.0015	0.0014	0.0050	J	mg/L	1	8/20/2019 4:02:48 PM	46881
Zinc	0.013	0.0058	0.010		mg/L	1	8/20/2019 4:02:48 PM	46881
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 10:58:29 PM	C62319
Arsenic	0.0010	0.00010	0.0010		mg/L	1	8/21/2019 10:58:29 PM	C62319
Lead	0.000061	0.000055	0.00050	J	mg/L	1	8/21/2019 10:58:29 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 10:58:29 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 10:58:29 PM	C62319
Uranium	0.0012	0.000075	0.00050		mg/L	1	8/21/2019 10:58:29 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/19/2019 7:11:54 PM	46881
Arsenic	0.0014	0.00031	0.0010		mg/L	1	8/19/2019 7:11:54 PM	46881
Lead	0.0014	0.000055	0.00050		mg/L	1	8/19/2019 7:11:54 PM	46881
Selenium	ND	0.00048	0.0010		mg/L	1	8/19/2019 7:11:54 PM	46881
Thallium	ND	0.000052	0.00050		mg/L	1	8/19/2019 7:11:54 PM	46881
Uranium	0.0015	0.000085	0.00050		mg/L	1	8/19/2019 7:11:54 PM	46881
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:48:27 PM	47219
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 3:37:00 PM	R62266

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 1:45:00 PM
Lab ID: 1908900-009
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Acetone	ND	1.2	10		µg/L	1	8/20/2019 3:37:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 3:37:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 3:37:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 3:37:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 3:37:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3C
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 1:45:00 PM
Lab ID: 1908900-009
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 3:37:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 3:37:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/20/2019 3:37:00 PM	R62266
Surr: 4-Bromofluorobenzene	96.7	0	70-130		%Rec	1	8/20/2019 3:37:00 PM	R62266
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	1	8/20/2019 3:37:00 PM	R62266
Surr: Toluene-d8	98.6	0	70-130		%Rec	1	8/20/2019 3:37:00 PM	R62266

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3B
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 2:20:00 PM
Lab ID: 1908900-010
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/18/2019 9:22:22 PM	46856
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/18/2019 9:22:22 PM	46856
Surr: DNOP	109	0	70-130		%Rec	1	8/18/2019 9:22:22 PM	46856
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 12:41:27 PM	G62395
Surr: BFB	104	0	65.8-143		%Rec	1	8/24/2019 12:41:27 PM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.4	0.073	0.50		mg/L	5	8/16/2019 11:32:23 AM	R62225
Chloride	31	2.5	2.5		mg/L	5	8/16/2019 11:32:23 AM	R62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 11:32:23 AM	R62225
Bromide	0.41	0.089	0.50	J	mg/L	5	8/16/2019 11:32:23 AM	R62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 11:32:23 AM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 11:32:23 AM	R62225
Sulfate	48	0.33	2.5		mg/L	5	8/16/2019 11:32:23 AM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/3/2019 6:17:11 PM	B62619
Barium	0.10	0.00065	0.0020		mg/L	1	9/3/2019 6:17:11 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 6:17:11 PM	B62619
Boron	0.98	0.023	0.20		mg/L	5	9/3/2019 7:16:05 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 6:17:11 PM	B62619
Calcium	8.0	0.062	1.0		mg/L	1	9/3/2019 6:17:11 PM	B62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 6:17:11 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 6:17:11 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 6:17:11 PM	B62619
Iron	0.35	0.0087	0.020	*	mg/L	1	9/3/2019 6:17:11 PM	B62619
Magnesium	2.6	0.050	1.0		mg/L	1	9/3/2019 6:17:11 PM	B62619
Manganese	0.10	0.00029	0.0020	*	mg/L	1	9/3/2019 6:17:11 PM	B62619
Molybdenum	0.012	0.0067	0.0080		mg/L	1	9/3/2019 6:17:11 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 6:17:11 PM	B62619
Potassium	0.61	0.16	1.0	J	mg/L	1	9/3/2019 6:17:11 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 6:17:11 PM	B62619
Sodium	420	2.1	5.0		mg/L	5	9/6/2019 3:57:27 PM	B62735
Zinc	0.0051	0.0023	0.010	J	mg/L	1	9/3/2019 6:17:11 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.086	0.0025	0.020		mg/L	1	8/20/2019 4:11:07 PM	46881
Barium	0.11	0.00065	0.0020		mg/L	1	8/20/2019 4:11:07 PM	46881
Beryllium	ND	0.00028	0.0020		mg/L	1	8/20/2019 4:11:07 PM	46881

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D	Sample Diluted Due to Matrix
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3B
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 2:20:00 PM
Lab ID: 1908900-010
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.1	0.023	0.20		mg/L	5	8/28/2019 1:40:05 PM	46881
Cadmium	ND	0.00074	0.0020		mg/L	1	8/20/2019 4:11:07 PM	46881
Chromium	ND	0.0015	0.0060		mg/L	1	8/20/2019 4:11:07 PM	46881
Cobalt	ND	0.0031	0.0060		mg/L	1	8/20/2019 4:11:07 PM	46881
Copper	ND	0.0041	0.0060		mg/L	1	8/20/2019 4:11:07 PM	46881
Iron	0.43	0.0087	0.020	*	mg/L	1	8/20/2019 4:11:07 PM	46881
Manganese	0.11	0.00029	0.0020	*	mg/L	1	8/20/2019 4:11:07 PM	46881
Molybdenum	0.013	0.0067	0.0080		mg/L	1	8/20/2019 4:11:07 PM	46881
Nickel	ND	0.0040	0.010		mg/L	1	8/20/2019 4:11:07 PM	46881
Silver	ND	0.0014	0.0050		mg/L	1	8/20/2019 4:11:07 PM	46881
Zinc	ND	0.0058	0.010		mg/L	1	8/20/2019 4:11:07 PM	46881
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 11:01:11 PM	C62319
Arsenic	0.0059	0.00010	0.0010		mg/L	1	8/21/2019 11:01:11 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 11:01:11 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 11:01:11 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 11:01:11 PM	C62319
Uranium	0.00011	0.000075	0.00050	J	mg/L	1	8/21/2019 11:01:11 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/19/2019 7:14:06 PM	46881
Arsenic	0.0061	0.00031	0.0010		mg/L	1	8/19/2019 7:14:06 PM	46881
Lead	0.000094	0.000055	0.00050	J	mg/L	1	8/19/2019 7:14:06 PM	46881
Selenium	ND	0.00048	0.0010		mg/L	1	8/19/2019 7:14:06 PM	46881
Thallium	ND	0.000052	0.00050		mg/L	1	8/19/2019 7:14:06 PM	46881
Uranium	0.00012	0.000085	0.00050	J	mg/L	1	8/19/2019 7:14:06 PM	46881
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:50:43 PM	47219
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 4:02:00 PM	R62266

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3B
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 2:20:00 PM
Lab ID: 1908900-010
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Acetone	ND	1.2	10		µg/L	1	8/20/2019 4:02:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 4:02:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 4:02:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 4:02:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 4:02:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-3B
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Collection Date: 8/14/2019 2:20:00 PM
Lab ID: 1908900-010
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 4:02:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 4:02:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	8/20/2019 4:02:00 PM	R62266
Surr: 4-Bromofluorobenzene	96.1	0	70-130		%Rec	1	8/20/2019 4:02:00 PM	R62266
Surr: Dibromofluoromethane	97.5	0	70-130		%Rec	1	8/20/2019 4:02:00 PM	R62266
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	8/20/2019 4:02:00 PM	R62266

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MW-5
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 4:30:00 PM
Lab ID: 1908900-011
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 1:18:09 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 1:18:09 PM	46893
Surr: DNOP	105	0	70-130		%Rec	1	8/20/2019 1:18:09 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/24/2019 1:04:21 PM	G62395
Surr: BFB	103	0	65.8-143		%Rec	1	8/24/2019 1:04:21 PM	G62395
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.77	0.073	0.50		mg/L	5	8/16/2019 11:58:06 AM	R62225
Chloride	60	2.5	2.5		mg/L	5	8/16/2019 11:58:06 AM	R62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 11:58:06 AM	R62225
Bromide	ND	0.089	0.50		mg/L	5	8/16/2019 11:58:06 AM	R62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 11:58:06 AM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 11:58:06 AM	R62225
Sulfate	180	0.33	2.5		mg/L	5	8/16/2019 11:58:06 AM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0033	0.0025	0.020	J	mg/L	1	9/3/2019 6:19:06 PM	B62619
Barium	0.016	0.00065	0.0020		mg/L	1	9/3/2019 6:19:06 PM	B62619
Beryllium	ND	0.00028	0.0020		mg/L	1	9/3/2019 6:19:06 PM	B62619
Boron	0.75	0.0045	0.040		mg/L	1	9/3/2019 6:19:06 PM	B62619
Cadmium	ND	0.00055	0.0020		mg/L	1	9/3/2019 6:19:06 PM	B62619
Calcium	1.4	0.062	1.0		mg/L	1	9/3/2019 6:19:06 PM	B62619
Chromium	ND	0.0015	0.0060		mg/L	1	9/3/2019 6:19:06 PM	B62619
Cobalt	ND	0.0031	0.0060		mg/L	1	9/3/2019 6:19:06 PM	B62619
Copper	ND	0.0013	0.0060		mg/L	1	9/3/2019 6:19:06 PM	B62619
Iron	ND	0.0087	0.020		mg/L	1	9/3/2019 6:19:06 PM	B62619
Magnesium	0.14	0.050	1.0	J	mg/L	1	9/3/2019 6:19:06 PM	B62619
Manganese	0.0037	0.00029	0.0020		mg/L	1	9/3/2019 6:19:06 PM	B62619
Molybdenum	0.0083	0.0067	0.0080		mg/L	1	9/3/2019 6:19:06 PM	B62619
Nickel	ND	0.0040	0.010		mg/L	1	9/3/2019 6:19:06 PM	B62619
Potassium	0.61	0.16	1.0	J	mg/L	1	9/3/2019 6:19:06 PM	B62619
Silver	ND	0.00094	0.0050		mg/L	1	9/3/2019 6:19:06 PM	B62619
Sodium	290	2.1	5.0		mg/L	5	9/6/2019 3:59:23 PM	B62735
Zinc	0.0060	0.0023	0.010	J	mg/L	1	9/3/2019 6:19:06 PM	B62619
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.0098	0.0025	0.020	J	mg/L	1	8/26/2019 2:42:48 PM	A62442
Barium	0.030	0.00065	0.0020		mg/L	1	8/26/2019 2:42:48 PM	A62442
Beryllium	ND	0.00028	0.0020		mg/L	1	8/26/2019 2:42:48 PM	A62442

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CLIENT: MARATHON GALLUP
Client Sample ID: MW-5
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Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.76	0.0045	0.040		mg/L	1	8/26/2019 2:42:48 PM	A62442
Cadmium	ND	0.00074	0.0020		mg/L	1	8/26/2019 2:42:48 PM	A62442
Chromium	ND	0.0015	0.0060		mg/L	1	8/26/2019 2:42:48 PM	A62442
Cobalt	ND	0.0031	0.0060		mg/L	1	8/26/2019 2:42:48 PM	A62442
Copper	ND	0.0041	0.0060		mg/L	1	8/26/2019 2:42:48 PM	A62442
Iron	ND	0.0087	0.020		mg/L	1	8/26/2019 2:42:48 PM	A62442
Manganese	0.0059	0.00029	0.0020		mg/L	1	8/26/2019 2:42:48 PM	A62442
Molybdenum	0.0080	0.0067	0.0080		mg/L	1	8/26/2019 2:42:48 PM	A62442
Nickel	ND	0.0040	0.010		mg/L	1	8/26/2019 2:42:48 PM	A62442
Silver	ND	0.0014	0.0050		mg/L	1	8/26/2019 2:42:48 PM	A62442
Zinc	ND	0.0058	0.010		mg/L	1	8/26/2019 2:42:48 PM	A62442
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 11:03:52 PM	C62319
Arsenic	0.00098	0.00010	0.0010	J	mg/L	1	8/21/2019 11:03:52 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 11:03:52 PM	C62319
Selenium	ND	0.00017	0.0010		mg/L	1	8/21/2019 11:03:52 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 11:03:52 PM	C62319
Uranium	0.0078	0.000075	0.00050		mg/L	1	8/21/2019 11:03:52 PM	C62319
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/20/2019 7:38:38 PM	C62284
Arsenic	0.00099	0.00031	0.0010	J	mg/L	1	8/20/2019 7:38:38 PM	C62284
Lead	ND	0.000055	0.00050		mg/L	1	8/20/2019 7:38:38 PM	C62284
Selenium	ND	0.00048	0.0010		mg/L	1	8/21/2019 11:49:51 PM	D62319
Thallium	ND	0.000052	0.00050		mg/L	1	8/20/2019 7:38:38 PM	C62284
Uranium	0.0090	0.00042	0.0025		mg/L	5	8/28/2019 7:54:24 PM	C62501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/3/2019 4:53:00 PM	47219
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Acenaphthylene	ND	2.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Aniline	ND	3.6	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Anthracene	ND	2.7	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Azobenzene	ND	3.3	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/20/2019 7:20:06 PM	46870

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CLIENT: MARATHON GALLUP
Client Sample ID: MW-5
Project: 2019 Annual 3Rd QTR GW Sampling
Collection Date: 8/14/2019 4:30:00 PM
Lab ID: 1908900-011
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Benzoic acid	ND	11	20		µg/L	1	8/20/2019 7:20:06 PM	46870
Benzyl alcohol	ND	2.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Bis(2-ethylhexyl)phthalate	18	4.3	10		µg/L	1	8/20/2019 7:20:06 PM	46870
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Carbazole	ND	2.9	10		µg/L	1	8/20/2019 7:20:06 PM	46870
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
4-Chloroaniline	ND	2.3	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2-Chlorophenol	ND	2.7	10		µg/L	1	8/20/2019 7:20:06 PM	46870
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Chrysene	ND	2.8	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Dibenzofuran	ND	3.2	10		µg/L	1	8/20/2019 7:20:06 PM	46870
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/20/2019 7:20:06 PM	46870
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/20/2019 7:20:06 PM	46870
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Diethyl phthalate	ND	2.9	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/20/2019 7:20:06 PM	46870
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/20/2019 7:20:06 PM	46870
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/20/2019 7:20:06 PM	46870
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Fluoranthene	ND	2.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Fluorene	ND	2.9	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Hexachloroethane	ND	4.8	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/20/2019 7:20:06 PM	46870

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2-Methylphenol	ND	2.9	10		µg/L	1	8/20/2019 7:20:06 PM	46870
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/20/2019 7:20:06 PM	46870
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/20/2019 7:20:06 PM	46870
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Naphthalene	ND	4.1	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2-Nitroaniline	ND	3.2	10		µg/L	1	8/20/2019 7:20:06 PM	46870
3-Nitroaniline	ND	3.2	10		µg/L	1	8/20/2019 7:20:06 PM	46870
4-Nitroaniline	ND	2.7	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Nitrobenzene	ND	2.8	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2-Nitrophenol	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
4-Nitrophenol	ND	7.6	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Pentachlorophenol	ND	2.7	20		µg/L	1	8/20/2019 7:20:06 PM	46870
Phenanthrene	ND	2.8	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Phenol	ND	8.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Pyrene	ND	2.5	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Pyridine	ND	9.6	10		µg/L	1	8/20/2019 7:20:06 PM	46870
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/20/2019 7:20:06 PM	46870
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/20/2019 7:20:06 PM	46870
Surr: 2-Fluorophenol	64.4	0	15-101		%Rec	1	8/20/2019 7:20:06 PM	46870
Surr: Phenol-d5	46.1	0	15-84.6		%Rec	1	8/20/2019 7:20:06 PM	46870
Surr: 2,4,6-Tribromophenol	67.2	0	27.8-112		%Rec	1	8/20/2019 7:20:06 PM	46870
Surr: Nitrobenzene-d5	88.8	0	33-113		%Rec	1	8/20/2019 7:20:06 PM	46870
Surr: 2-Fluorobiphenyl	75.2	0	26.6-107		%Rec	1	8/20/2019 7:20:06 PM	46870
Surr: 4-Terphenyl-d14	81.1	0	18.7-148		%Rec	1	8/20/2019 7:20:06 PM	46870
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 4:26:00 PM	R62266

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
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Lab ID: 1908900-011
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Acetone	ND	1.2	10		µg/L	1	8/20/2019 4:26:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 4:26:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 4:26:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 4:26:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 4:26:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 4:26:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 4:26:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	8/20/2019 4:26:00 PM	R62266
Surr: 4-Bromofluorobenzene	98.7	0	70-130		%Rec	1	8/20/2019 4:26:00 PM	R62266
Surr: Dibromofluoromethane	97.2	0	70-130		%Rec	1	8/20/2019 4:26:00 PM	R62266
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	8/20/2019 4:26:00 PM	R62266

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Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 26, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1130596

Samples Received: 08/20/2019

Project Number:

Description:

Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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1908900-003G MW-4 L1130596-01 WW

Collected by	Collected date/time	Received date/time
	08/13/19 04:05	08/20/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1333740	1	08/24/19 15:30	08/26/19 12:14	SDL	Mt. Juliet, TN

1908900-011G MW-5 L1130596-02 WW

Collected by	Collected date/time	Received date/time
	08/13/19 04:30	08/20/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1333740	1	08/24/19 15:30	08/26/19 12:15	SDL	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/26/2019 12:14	WG1333740

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/26/2019 12:15	WG1333740

Method Blank (MB)

(MB) R3444188-1 08/26/19 11:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1130596-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1130596-02 08/26/19 12:15 • (DUP) R3444188-5 08/26/19 12:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3444188-2 08/26/19 11:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.107	107	85.0-115	

L1129934-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129934-02 08/26/19 11:57 • (MS) R3444188-3 08/26/19 11:58 • (MSD) R3444188-4 08/26/19 11:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0955	0.0952	90.9	90.6	1	75.0-125			0.315	20

L1130597-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130597-01 08/26/19 12:17 • (MS) R3444188-6 08/26/19 12:18 • (MSD) R3444188-7 08/26/19 12:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0635	0.0812	63.5	81.2	1	75.0-125	J6	J3	24.5	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

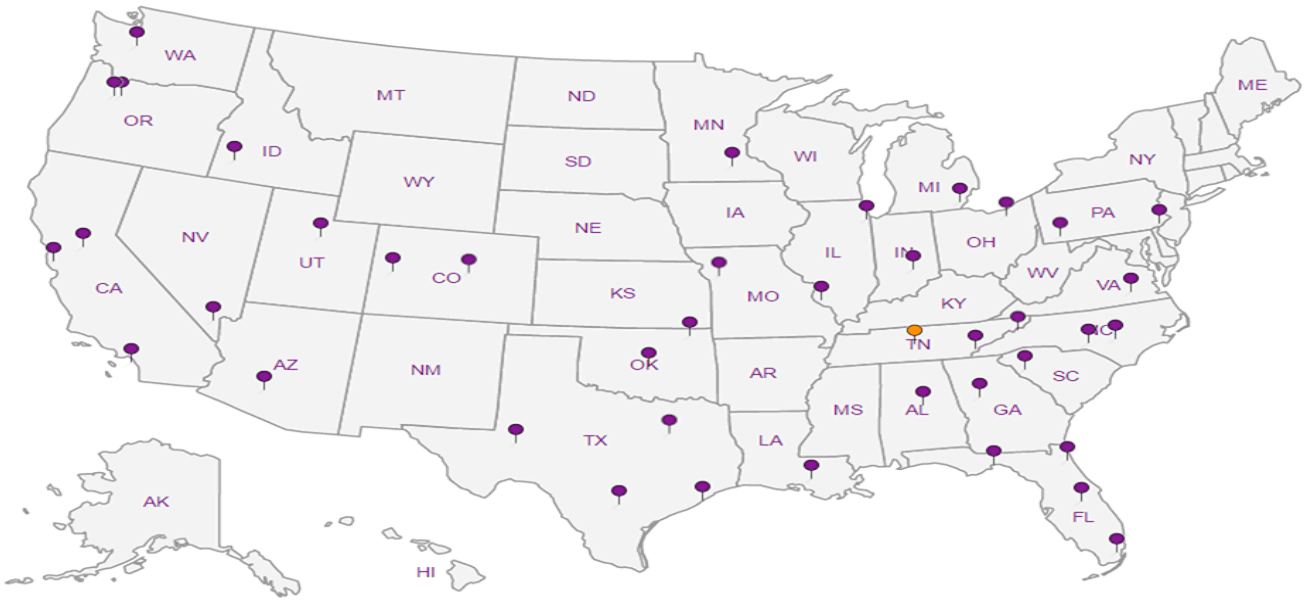
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

J021

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: **ESC PACE**	COMPANY: **ESC PACE**		PHONE: **(800) 767-5859**	FAX: **(615) 758-5859**	
ADDRESS: **12065 Lebanon Rd**			ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP: **Mt. Juliet, TN 37122**					

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	1908900-003G	MW-4	500AMBHDP F-NAOH	Aqueous	8/13/2019 4:05:00 PM	1	Total Cyanide Lv. 4 7.2	L1130596-01
2	1908900-011G	MW-5	500AMBHDP F-NAOH	Aqueous	8/14/2019 4:30:00 PM	1	Total Cyanide Lv. 4 7.2	02

RAD SCREEN: <0.5 mR/hr

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 8/16/2019	Time: 9:46 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 8/20/19	Time: 8:20

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

451C 1668 8430

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples 4.1+0.3 Attempt to Cool ? Y

ASap

Comments:

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: HALLENVANM	SDG#:	L1130596
Cooler Received/Opened On: 8/20/19	Temperature:	0.5°C
Received By: Jordan Harris		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **LCS-46881** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **46881** RunNo: **62280**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115843** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.49	0.020	0.5000	0	98.5	85	115			
Barium	0.46	0.0020	0.5000	0	92.8	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.8	85	115			
Boron	0.47	0.040	0.5000	0	94.4	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.4	85	115			
Chromium	0.47	0.0060	0.5000	0	94.3	85	115			
Cobalt	0.46	0.0060	0.5000	0	92.9	85	115			
Copper	0.48	0.0060	0.5000	0	95.8	85	115			
Iron	0.47	0.020	0.5000	0	93.6	85	115			
Manganese	0.47	0.0020	0.5000	0	94.5	85	115			
Molybdenum	0.47	0.0080	0.5000	0	93.9	85	115			
Nickel	0.46	0.010	0.5000	0	91.1	85	115			
Silver	0.093	0.0050	0.1000	0	92.6	85	115			
Zinc	0.46	0.010	0.5000	0	92.7	85	115			

Sample ID: **MB-46881** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **46881** RunNo: **62280**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115857** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-46881** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **46881** RunNo: **62280**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

16-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **LLLCS-46881**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **46881**	RunNo: **62280**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.013	0.020	0.01000	0	133	50	150			J
Barium	0.0019	0.0020	0.002000	0	94.6	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			
Boron	0.039	0.040	0.04000	0	96.5	50	150			J
Cadmium	0.0024	0.0020	0.002000	0	119	50	150			
Chromium	0.0056	0.0060	0.006000	0	92.8	50	150			J
Cobalt	0.0045	0.0060	0.006000	0	75.1	50	150			J
Copper	0.0056	0.0060	0.006000	0	94.1	50	150			J
Iron	0.021	0.020	0.02000	0	103	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0076	0.0080	0.008000	0	95.0	50	150			J
Nickel	0.0046	0.010	0.005000	0	91.6	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.8	50	150			J
Zinc	0.014	0.010	0.01000	0	137	50	150			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123347** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

16-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0092	0.020	0.01000	0	91.5	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0018	0.0020	0.002000	0	90.9	50	150			J
Boron	0.038	0.040	0.04000	0	96.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Cobalt	0.0052	0.0060	0.006000	0	86.7	50	150			J
Copper	0.0056	0.0060	0.006000	0	92.6	50	150			J
Iron	0.020	0.020	0.02000	0	100	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.8	50	150			J
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0064	0.010	0.005000	0	128	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.6	50	150			J
Zinc	0.010	0.010	0.01000	0	99.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.47	0.0020	0.5000	0	94.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.49	0.040	0.5000	0	97.8	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.7	85	115			
Copper	0.48	0.0060	0.5000	0	96.8	85	115			
Iron	0.49	0.020	0.5000	0	98.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.3	85	115			
Nickel	0.48	0.010	0.5000	0	95.5	85	115			
Silver	0.096	0.0050	0.1000	0	96.2	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2131037** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2131038** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0092	0.020	0.01000	0	91.8	50	150			J
Barium	0.0019	0.0020	0.002000	0	94.3	50	150			J
Beryllium	0.0017	0.0020	0.002000	0	86.8	50	150			J
Boron	0.038	0.040	0.04000	0	95.4	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	109	50	150			
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Cobalt	0.0052	0.0060	0.006000	0	86.6	50	150			J
Copper	0.0056	0.0060	0.006000	0	93.9	50	150			J
Iron	0.019	0.020	0.02000	0	96.8	50	150			J
Magnesium	0.50	1.0	0.5000	0	99.9	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.010	0.0080	0.008000	0	125	50	150			
Nickel	0.0058	0.010	0.005000	0	117	50	150			J
Potassium	0.48	1.0	0.5000	0	95.3	50	150			J
Silver	0.0040	0.0050	0.005000	0	80.2	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

16-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2131038** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0099	0.010	0.01000	0	99.3	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62619**	RunNo: **62619**
Prep Date:	Analysis Date: **9/3/2019**	SeqNo: **2131039** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.48	0.020	0.5000	0	96.7	85	115			
Barium	0.47	0.0020	0.5000	0	94.3	85	115			
Beryllium	0.48	0.0020	0.5000	0	95.7	85	115			
Boron	0.48	0.040	0.5000	0	96.9	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.5	85	115			
Calcium	50	1.0	50.00	0	99.8	85	115			
Chromium	0.47	0.0060	0.5000	0	94.5	85	115			
Cobalt	0.46	0.0060	0.5000	0	92.3	85	115			
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Iron	0.48	0.020	0.5000	0	96.3	85	115			
Magnesium	50	1.0	50.00	0	99.8	85	115			
Manganese	0.47	0.0020	0.5000	0	94.4	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.2	85	115			
Nickel	0.46	0.010	0.5000	0	92.8	85	115			
Potassium	50	1.0	50.00	0	99.4	85	115			
Silver	0.095	0.0050	0.1000	0	94.6	85	115			
Zinc	0.47	0.010	0.5000	0	94.4	85	115			

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.54	1.0	0.5000	0	107	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **MB-46881**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **46881**	RunNo: **62253**							
Prep Date: **8/19/2019**	Analysis Date: **8/19/2019**	SeqNo: **2115049**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-46881**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **46881**	RunNo: **62253**							
Prep Date: **8/19/2019**	Analysis Date: **8/19/2019**	SeqNo: **2115055**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00090	0.0010	0.001000	0	89.9	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00052	0.00050	0.0005000	0	105	50	150			
Selenium	0.00098	0.0010	0.001000	0	98.3	50	150			J
Thallium	0.00045	0.00050	0.0005000	0	89.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.7	50	150			J

Sample ID: **MSLCS-46881**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **46881**	RunNo: **62253**							
Prep Date: **8/19/2019**	Analysis Date: **8/19/2019**	SeqNo: **2115061**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	106	85	115			
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	94.7	85	115			
Thallium	0.013	0.00050	0.01250	0	101	85	115			
Uranium	0.012	0.00050	0.01250	0	97.0	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **C62284**	RunNo: **62284**							
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116312**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Thallium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C62284**	RunNo: **62284**							
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116313**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00080	0.0010	0.001000	0	80.4	50	150			J
Arsenic	0.00096	0.0010	0.001000	0	96.2	50	150			J
Lead	0.00051	0.00050	0.0005000	0	103	50	150			
Thallium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C62284**	RunNo: **62284**							
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116314**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	103	85	115			
Arsenic	0.028	0.0010	0.02500	0	111	85	115			
Lead	0.013	0.00050	0.01250	0	108	85	115			
Thallium	0.013	0.00050	0.01250	0	107	85	115			

Sample ID: **1908900-004DMS**	SampType: **MS**	TestCode: **EPA 200.8: Metals**							
Client ID: **BW-1C**	Batch ID: **C62284**	RunNo: **62284**							
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116328**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	106	70	130			
Arsenic	0.029	0.0010	0.02500	0	114	70	130			
Lead	0.013	0.00050	0.01250	0	103	70	130			
Thallium	0.013	0.00050	0.01250	0	102	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117863**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								
Uranium	0.00010	0.00050								J

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117864**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0010	0.0010	0.001000	0	99.7	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	91.9	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117865**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	94.7	85	115			
Uranium	0.011	0.00050	0.01250	0	86.4	85	115			

Sample ID: **1908900-004DMS**	SampType: **MS**	TestCode: **EPA 200.8: Metals**							
Client ID: **BW-1C**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117868**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.026	0.0010	0.02500	0	103	70	130			

Sample ID: **1908900-004DMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Metals**							
Client ID: **BW-1C**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117872**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	98.5	70	130	4.18	20	

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126594**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126595**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126596**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117837** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00075	0.0010	0.001000	0	75.3	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00050	0.00050	0.0005000	0	100	50	150			J
Selenium	0.00097	0.0010	0.001000	0	97.0	50	150			J
Thallium	0.00048	0.00050	0.0005000	0	95.3	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	89.8	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117838** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.9	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.9	85	115			
Lead	0.012	0.00050	0.01250	0	95.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.3	85	115			
Thallium	0.012	0.00050	0.01250	0	95.0	85	115			
Uranium	0.011	0.00050	0.01250	0	87.3	85	115			

Sample ID: **1908900-003FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MW-4** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.7	70	130			
Arsenic	0.026	0.0010	0.02500	0.0007836	102	70	130			
Lead	0.011	0.00050	0.01250	0	88.3	70	130			
Selenium	0.027	0.0010	0.02500	0	109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

16-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **1908900-003FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **MW-4** Batch ID: **C62319** RunNo: **62319**

Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.011	0.00050	0.01250	0	87.5	70	130			
Uranium	0.025	0.00050	0.01250	0.01378	89.8	70	130			

Sample ID: **1908900-003FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**

Client ID: **MW-4** Batch ID: **C62319** RunNo: **62319**

Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117847** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	104	70	130	4.06	20	
Arsenic	0.026	0.0010	0.02500	0.0007836	102	70	130	0.556	20	
Lead	0.011	0.00050	0.01250	0	89.6	70	130	1.48	20	
Selenium	0.024	0.0010	0.02500	0	95.8	70	130	12.6	20	
Thallium	0.011	0.00050	0.01250	0	88.5	70	130	1.11	20	
Uranium	0.024	0.00050	0.01250	0.01378	84.7	70	130	2.58	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

16-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **MB-47219**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **47219**	RunNo: **62608**
Prep Date: **9/3/2019**	Analysis Date: **9/3/2019**	SeqNo: **2130622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-47219**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **47219**	RunNo: **62608**
Prep Date: **9/3/2019**	Analysis Date: **9/3/2019**	SeqNo: **2130623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.9	80	120			

Sample ID: **1908900-003EMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MW-4**	Batch ID: **47219**	RunNo: **62608**
Prep Date: **9/3/2019**	Analysis Date: **9/3/2019**	SeqNo: **2130625** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.6	75	125			

Sample ID: **1908900-003EMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **MW-4**	Batch ID: **47219**	RunNo: **62608**
Prep Date: **9/3/2019**	Analysis Date: **9/3/2019**	SeqNo: **2130626** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	75	125	1.13	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **A62192** RunNo: **62192**
Prep Date: Analysis Date: **8/16/2019** SeqNo: **2111674** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **A62192** RunNo: **62192**
Prep Date: Analysis Date: **8/16/2019** SeqNo: **2111675** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.3	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.8	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			
Sulfate	10	0.50	10.00	0	101	90	110			

Sample ID: **1908900-005CMS** SampType: **ms** TestCode: **EPA Method 300.0: Anions**
Client ID: **BW-2B** Batch ID: **A62192** RunNo: **62192**
Prep Date: Analysis Date: **8/16/2019** SeqNo: **2111710** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	57	2.5	25.00	31.47	103	83.1	116			
Nitrogen, Nitrite (As N)	4.6	0.50	5.000	0.06840	91.6	53.4	119			
Bromide	13	0.50	12.50	0.7062	96.8	81.9	109			
Nitrogen, Nitrate (As N)	12	0.50	12.50	0.06491	98.4	87.9	118			
Phosphorus, Orthophosphate (As P	24	2.5	25.00	0	97.1	75.6	113			

Sample ID: **1908900-005CMSD** SampType: **msd** TestCode: **EPA Method 300.0: Anions**
Client ID: **BW-2B** Batch ID: **A62192** RunNo: **62192**
Prep Date: Analysis Date: **8/16/2019** SeqNo: **2111711** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	56	2.5	25.00	31.47	96.5	83.1	116	2.74	20	
Nitrogen, Nitrite (As N)	4.6	0.50	5.000	0.06840	89.7	53.4	119	2.06	20	
Bromide	13	0.50	12.50	0.7062	95.3	81.9	109	1.46	20	
Nitrogen, Nitrate (As N)	12	0.50	12.50	0.06491	96.3	87.9	118	2.20	20	
Phosphorus, Orthophosphate (As P	24	2.5	25.00	0	95.7	75.6	113	1.43	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R62225**	RunNo: **62225**							
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113414**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R62225**	RunNo: **62225**							
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113415**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.7	0.50	5.000	0	94.7	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Bromide	2.4	0.10	2.500	0	96.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.9	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.3	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.5	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R62484**	RunNo: **62484**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125320**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R62484**	RunNo: **62484**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125321**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **MB-46856**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **46856**	RunNo: **62217**
Prep Date: **8/16/2019**	Analysis Date: **8/18/2019**	SeqNo: **2112847** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.90		1.000		89.6	70	130			

Sample ID: **LCS-46856**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **46856**	RunNo: **62217**
Prep Date: **8/16/2019**	Analysis Date: **8/18/2019**	SeqNo: **2112848** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	89.2	71.8	135			
Surr: DNOP	0.44		0.5000		87.8	70	130			

Sample ID: **LCS-46893**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **46893**	RunNo: **62247**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115351** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	89.5	71.8	135			
Surr: DNOP	0.43		0.5000		85.2	70	130			

Sample ID: **MB-46893**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **46893**	RunNo: **62247**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.95		1.000		94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

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Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G62395**	RunNo: **62395**
Prep Date:	Analysis Date: **8/24/2019**	SeqNo: **2120841** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	24		20.00		118	65.8	143			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G62395**	RunNo: **62395**
Prep Date:	Analysis Date: **8/24/2019**	SeqNo: **2120842** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.39	0.050	0.5000	0	79.0	73.6	119			
Surr: BFB	23		20.00		117	65.8	143			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R62227** RunNo: **62227**
Prep Date: Analysis Date: **8/19/2019** SeqNo: **2115557** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	87.5	70	130			
Toluene	19	1.0	20.00	0	95.0	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	83.0	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	82.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.3	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.0	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R62227** RunNo: **62227**
Prep Date: Analysis Date: **8/19/2019** SeqNo: **2115586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.7	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.1	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.5	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **S62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115615** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	70	130			
Toluene	20	1.0	20.00	0	98.0	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.2	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.4	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **S62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115616** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **S62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115616** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.8	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **S62227**	RunNo: **62227**
Prep Date:	Analysis Date: **8/19/2019**	SeqNo: **2115616** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115960** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.4	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.2	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.9	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	0.51	10								J
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.3	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

16-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **lcs-46870**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115954** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.3	32.2	94			
4-Chloro-3-methylphenol	160	10	200.0	0	82.1	37.7	101			
2-Chlorophenol	170	10	200.0	0	83.4	32.6	90.1			
1,4-Dichlorobenzene	71	10	100.0	0	71.2	30	87.2			
2,4-Dinitrotoluene	65	10	100.0	0	65.1	35.9	85.8			
N-Nitrosodi-n-propylamine	90	10	100.0	0	90.3	37.1	108			
4-Nitrophenol	94	10	200.0	0	46.9	22.4	86.6			
Pentachlorophenol	120	20	200.0	0	61.7	31.6	91			
Phenol	120	10	200.0	0	58.4	21.7	84.9			
Pyrene	81	10	100.0	0	81.1	46.3	103			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.3	30.2	88.3			
Surr: 2-Fluorophenol	110		200.0		56.4	15	101			
Surr: Phenol-d5	92		200.0		45.8	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		61.2	27.8	112			
Surr: Nitrobenzene-d5	78		100.0		78.2	33	113			
Surr: 2-Fluorobiphenyl	62		100.0		62.1	26.6	107			
Surr: 4-Terphenyl-d14	66		100.0		65.6	18.7	148			

Sample ID: **lcsd-46870**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115955** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.6	32.2	94	4.93	32.9	
4-Chloro-3-methylphenol	160	10	200.0	0	80.4	37.7	101	2.07	29.9	
2-Chlorophenol	150	10	200.0	0	76.9	32.6	90.1	8.13	28.5	
1,4-Dichlorobenzene	71	10	100.0	0	71.2	15	87.2	0.0562	44.9	
2,4-Dinitrotoluene	68	10	100.0	0	67.6	35.9	85.8	3.74	28.5	
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.0	37.1	108	8.47	29.9	
4-Nitrophenol	91	10	200.0	0	45.3	15	86.6	3.53	68	
Pentachlorophenol	110	20	200.0	0	56.6	31.6	91	8.74	39.5	
Phenol	110	10	200.0	0	53.9	15	84.9	7.96	44.2	
Pyrene	76	10	100.0	0	75.8	46.3	103	6.81	23.8	
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	15.7	88.3	1.68	38	
Surr: 2-Fluorophenol	100		200.0		51.3	15	101	0	0	
Surr: Phenol-d5	80		200.0		39.8	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		55.1	27.8	112	0	0	
Surr: Nitrobenzene-d5	75		100.0		75.1	33	113	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		62.8	26.6	107	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **lcsd-46870**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115955** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	64		100.0		64.0	18.7	148	0	0	

Sample ID: **mb-46870**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**
16-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **mb-46870**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	4.4	20								J
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908900**

16-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3Rd QTR GW Sampling

Sample ID: **mb-46870**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **46870**	RunNo: **62264**	
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115956**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.3	15	101			
Surr: Phenol-d5	96		200.0		48.0	15	84.6			
Surr: 2,4,6-Tribromophenol	130		200.0		66.0	27.8	112			
Surr: Nitrobenzene-d5	99		100.0		99.2	33	113			
Surr: 2-Fluorobiphenyl	84		100.0		83.9	26.6	107			
Surr: 4-Terphenyl-d14	72		100.0		72.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1908900 RcptNo: 1

Received By: **Erin Melendrez** 8/15/2019 4:30:00 PM

Completed By: **Erin Melendrez** 8/15/2019 5:01:49 PM

Reviewed By: ENM 8/16/19

unpreserved took back on 8/16/19 @08:00 LB

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			
2	2.6	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2019 ANNUAL/3Rd QTR GW SAMPLING

Project #:

OW/MW/SMW WELLS

Project Manager:

BRIAN MOORE (BMOORE1@MARATHONPETROLEUM.COM)

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: X Yes ☐ No

Sample Temperature: 2.5+0.2(CF) = 2.7°C

2.4+0.2(CF) = 2.6°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1908900	Analysis Request: 8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Air Bubbles (Y or N)
8/14/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X								
8/14/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X								
8/13/2019	1605	AQUEOUS	MW-4	MISC	MISC	-003	X	X	X	X	X	X		X	
8/14/2019	952	AQUEOUS	BW-1C	MISC	MISC	-004	X	X		X	X	X			
8/14/2019	1042	AQUEOUS	BW-2B	MISC	MISC	-005	X	X		X	X	X			
8/14/2019	1111	AQUEOUS	BW-2A	MISC	MISC	-006	X	X		X	X	X			
8/14/2019	1111	AQUEOUS	DUPLICATE	MISC	MISC	-007	X	X		X	X	X			
8/14/2019	1216	AQUEOUS	BW-2C	MISC	MISC	-008	X	X		X	X	X			
8/14/2019	1345	AQUEOUS	BW-3C	MISC	MISC	-009	X	X		X	X	X			
8/14/2019	1420	AQUEOUS	BW-3B	MISC	MISC	-010	X	X		X	X	X			
8/14/2019	1630	AQUEOUS	MW-5	MISC	MISC	-011	X	X	2	X	X	X		X	

Date	Time	Relinquished by	Received by	Date	Time
8/15/19	1440			8/15/19	1438
8/15/19	1630			8/15/19	1630

Remarks: BW-1C - use time on COC - not on bottles

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 26, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1130596

Samples Received: 08/20/2019

Project Number:

Description:

Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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1908900-003G MW-4 L1130596-01 WW

Collected by	Collected date/time	Received date/time
	08/13/19 04:05	08/20/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1333740	1	08/24/19 15:30	08/26/19 12:14	SDL	Mt. Juliet, TN

1908900-011G MW-5 L1130596-02 WW

Collected by	Collected date/time	Received date/time
	08/13/19 04:30	08/20/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1333740	1	08/24/19 15:30	08/26/19 12:15	SDL	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/26/2019 12:14	WG1333740

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	08/26/2019 12:15	WG1333740

Method Blank (MB)

(MB) R3444188-1 08/26/19 11:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1130596-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1130596-02 08/26/19 12:15 • (DUP) R3444188-5 08/26/19 12:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3444188-2 08/26/19 11:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.107	107	85.0-115	

L1129934-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1129934-02 08/26/19 11:57 • (MS) R3444188-3 08/26/19 11:58 • (MSD) R3444188-4 08/26/19 11:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0955	0.0952	90.9	90.6	1	75.0-125			0.315	20

L1130597-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130597-01 08/26/19 12:17 • (MS) R3444188-6 08/26/19 12:18 • (MSD) R3444188-7 08/26/19 12:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0635	0.0812	63.5	81.2	1	75.0-125	J6	J3	24.5	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

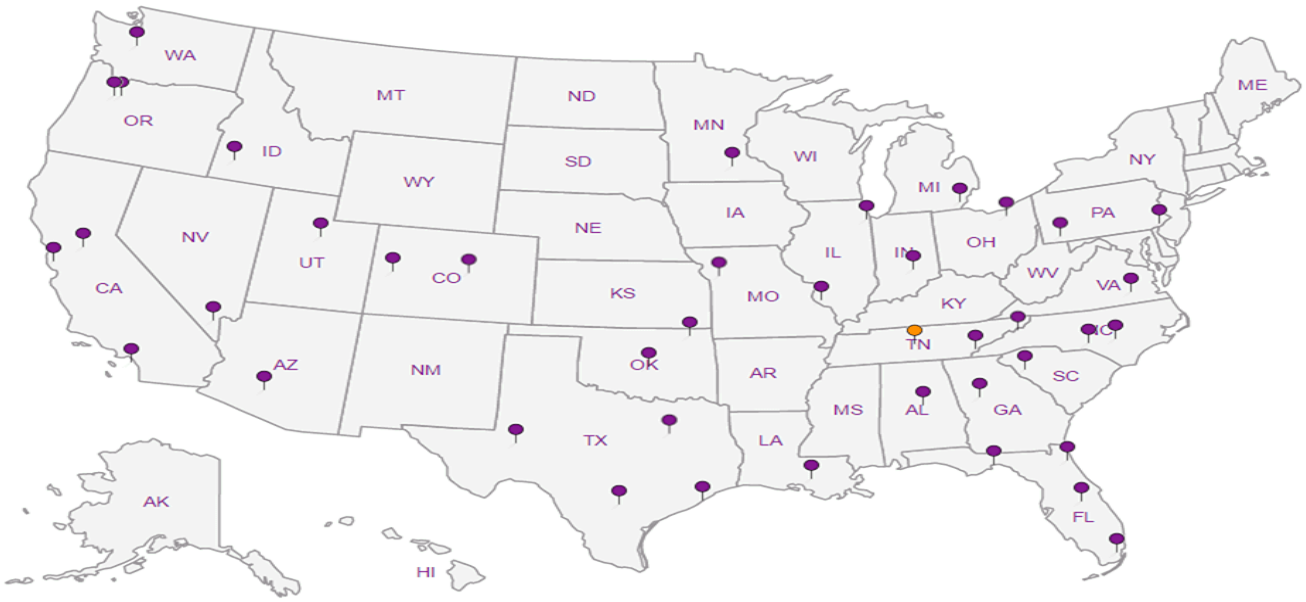
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

J021

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: **ESC PACE**	COMPANY: **ESC PACE**		PHONE: **(800) 767-5859**	FAX: **(615) 758-5859**	
ADDRESS: **12065 Lebanon Rd**			ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP: **Mt. Juliet, TN 37122**					

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	1908900-003G	MW-4	500AMBHDP F-NAOH	Aqueous	8/13/2019 4:05:00 PM	1	Total Cyanide Lv. 4 7.2	L1130596-01
2	1908900-011G	MW-5	500AMBHDP F-NAOH	Aqueous	8/14/2019 4:30:00 PM	1	Total Cyanide Lv. 4 7.2	02

RAD SCREEN: <0.5 mR/hr

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 8/16/2019	Time: 9:46 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 8/20/19	Time: 8:20

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

451C 1668 8430

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples 4.1+0.3 Attempt to Cool ? Y

ASap

Comments:

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: HALLENVANM	SDG#:	L1130596
Cooler Received/Opened On: 8/20/19	Temperature:	0.5°C
Received By: Jordan Harris		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 19, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2019 Annual 3rd QTR GW Sampling OrderNo.: 1908906

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/15/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 7:00:00 AM
Lab ID: 1908906-001
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Acetone	ND	1.2	10		µg/L	1	8/20/2019 4:51:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 4:51:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 4:51:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 4:51:00 PM	R62266

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 7:00:00 AM
Lab ID: 1908906-001 **Matrix:** AQUEOUS **Received Date:** 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 4:51:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 4:51:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 4:51:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 4:51:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	99.5	0	70-130		%Rec	1	8/20/2019 4:51:00 PM	R62266
Surr: 4-Bromofluorobenzene	95.0	0	70-130		%Rec	1	8/20/2019 4:51:00 PM	R62266
Surr: Dibromofluoromethane	95.6	0	70-130		%Rec	1	8/20/2019 4:51:00 PM	R62266
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	8/20/2019 4:51:00 PM	R62266

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 7:00:00 AM
Lab ID: 1908906-002
Matrix: TRIP BLANK
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Toluene	0.56	0.35	1.0	J	µg/L	1	8/20/2019 5:16:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Acetone	1.5	1.2	10	J	µg/L	1	8/20/2019 5:16:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 5:16:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 5:16:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Chlorobenzene	0.63	0.19	1.0	J	µg/L	1	8/20/2019 5:16:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 5:16:00 PM	R62266

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 7:00:00 AM
Lab ID: 1908906-002
Matrix: TRIP BLANK
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 5:16:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 5:16:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 5:16:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 5:16:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	8/20/2019 5:16:00 PM	R62266
Surr: 4-Bromofluorobenzene	96.5	0	70-130		%Rec	1	8/20/2019 5:16:00 PM	R62266
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	8/20/2019 5:16:00 PM	R62266
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	8/20/2019 5:16:00 PM	R62266

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 9:05:00 AM
Lab ID: 1908906-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 10:51:54 AM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 10:51:54 AM	46893
Surr: DNOP	98.4	0	70-130		%Rec	1	8/20/2019 10:51:54 AM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 9:44:44 AM	A62420
Surr: BFB	98.4	0	65.8-143		%Rec	1	8/26/2019 9:44:44 AM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.073	0.50		mg/L	5	8/16/2019 2:58:13 PM	R62225
Chloride	1400	50	50		mg/L	100	8/28/2019 1:17:41 PM	R62484
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 2:58:13 PM	R62225
Bromide	0.99	0.089	0.50		mg/L	5	8/16/2019 2:58:13 PM	R62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 2:58:13 PM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 2:58:13 PM	R62225
Sulfate	220	0.33	2.5		mg/L	5	8/16/2019 2:58:13 PM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/6/2019 4:05:27 PM	B62735
Barium	0.089	0.00065	0.0020		mg/L	1	9/6/2019 4:05:27 PM	B62735
Beryllium	ND	0.00028	0.0020		mg/L	1	9/6/2019 4:05:27 PM	B62735
Boron	0.52	0.0045	0.040		mg/L	1	9/6/2019 4:05:27 PM	B62735
Cadmium	ND	0.00055	0.0020		mg/L	1	9/6/2019 4:05:27 PM	B62735
Calcium	64	0.062	1.0		mg/L	1	9/6/2019 4:05:27 PM	B62735
Chromium	ND	0.0015	0.0060		mg/L	1	9/6/2019 4:05:27 PM	B62735
Cobalt	ND	0.0031	0.0060		mg/L	1	9/6/2019 4:05:27 PM	B62735
Copper	0.0039	0.0013	0.0060	J	mg/L	1	9/6/2019 4:05:27 PM	B62735
Iron	0.30	0.0087	0.020		mg/L	1	9/6/2019 4:05:27 PM	B62735
Magnesium	7.3	0.050	1.0		mg/L	1	9/6/2019 4:05:27 PM	B62735
Manganese	0.021	0.00029	0.0020		mg/L	1	9/6/2019 4:05:27 PM	B62735
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/6/2019 4:05:27 PM	B62735
Nickel	ND	0.0040	0.010		mg/L	1	9/6/2019 4:05:27 PM	B62735
Potassium	2.8	0.16	1.0		mg/L	1	9/6/2019 4:05:27 PM	B62735
Silver	0.0015	0.00094	0.0050	J	mg/L	1	9/6/2019 4:05:27 PM	B62735
Sodium	1100	8.3	20		mg/L	20	9/9/2019 2:11:35 PM	A62788
Zinc	0.013	0.0023	0.010		mg/L	1	9/6/2019 4:05:27 PM	B62735
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.38	0.0025	0.020	*	mg/L	1	8/22/2019 6:22:37 PM	46967
Barium	0.088	0.00065	0.0020		mg/L	1	8/22/2019 6:22:37 PM	46967
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 6:22:37 PM	46967

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Collection Date: 8/15/2019 9:05:00 AM
Lab ID: 1908906-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.49	0.0045	0.040		mg/L	1	8/22/2019 6:22:37 PM	46967
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 6:22:37 PM	46967
Chromium	0.0046	0.0015	0.0060	J	mg/L	1	8/22/2019 6:22:37 PM	46967
Cobalt	ND	0.0031	0.0060		mg/L	1	8/22/2019 6:22:37 PM	46967
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 6:22:37 PM	46967
Iron	0.53	0.0087	0.020	*	mg/L	1	8/22/2019 6:22:37 PM	46967
Manganese	0.024	0.00029	0.0020		mg/L	1	8/22/2019 6:22:37 PM	46967
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/22/2019 6:22:37 PM	46967
Nickel	0.0064	0.0040	0.010	J	mg/L	1	8/22/2019 6:22:37 PM	46967
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 6:22:37 PM	46967
Zinc	ND	0.0058	0.010		mg/L	1	8/22/2019 6:22:37 PM	46967
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	8/26/2019 9:47:00 PM	B62426
Arsenic	0.00038	0.00010	0.0010	J	mg/L	1	8/21/2019 11:06:34 PM	C62319
Lead	ND	0.000055	0.00050		mg/L	1	8/21/2019 11:06:34 PM	C62319
Selenium	0.00073	0.00017	0.0010	J	mg/L	1	8/21/2019 11:06:34 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 11:06:34 PM	C62319
Uranium	0.046	0.00037	0.0025	*	mg/L	5	8/28/2019 3:10:30 PM	A62501
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 4:29:44 PM	46967
Arsenic	0.00046	0.00031	0.0010	J	mg/L	1	8/22/2019 4:29:44 PM	46967
Lead	0.000068	0.000055	0.00050	J	mg/L	1	8/26/2019 2:11:48 PM	47036
Selenium	0.00091	0.00048	0.0010	J	mg/L	1	8/22/2019 4:29:44 PM	46967
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 4:29:44 PM	46967
Uranium	0.043	0.00042	0.0025	*	mg/L	5	9/5/2019 3:47:15 PM	47036
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00010	0.000038	0.00020	J	mg/L	1	8/28/2019 6:59:39 PM	47129
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Acenaphthylene	ND	2.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Aniline	ND	3.6	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Anthracene	ND	2.7	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Azobenzene	ND	3.3	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/20/2019 7:49:24 PM	46870

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Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Benzoic acid	ND	11	20		µg/L	1	8/20/2019 7:49:24 PM	46870
Benzyl alcohol	ND	2.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Bis(2-ethylhexyl)phthalate	6.9	4.3	10	J	µg/L	1	8/20/2019 7:49:24 PM	46870
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Carbazole	ND	2.9	10		µg/L	1	8/20/2019 7:49:24 PM	46870
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
4-Chloroaniline	ND	2.3	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2-Chlorophenol	ND	2.7	10		µg/L	1	8/20/2019 7:49:24 PM	46870
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Chrysene	ND	2.8	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Dibenzofuran	ND	3.2	10		µg/L	1	8/20/2019 7:49:24 PM	46870
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/20/2019 7:49:24 PM	46870
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/20/2019 7:49:24 PM	46870
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Diethyl phthalate	ND	2.9	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/20/2019 7:49:24 PM	46870
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/20/2019 7:49:24 PM	46870
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/20/2019 7:49:24 PM	46870
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Fluoranthene	ND	2.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Fluorene	ND	2.9	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Hexachloroethane	ND	4.8	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/20/2019 7:49:24 PM	46870

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 9:05:00 AM
Lab ID: 1908906-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2-Methylphenol	ND	2.9	10		µg/L	1	8/20/2019 7:49:24 PM	46870
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/20/2019 7:49:24 PM	46870
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/20/2019 7:49:24 PM	46870
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Naphthalene	ND	4.1	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2-Nitroaniline	ND	3.2	10		µg/L	1	8/20/2019 7:49:24 PM	46870
3-Nitroaniline	ND	3.2	10		µg/L	1	8/20/2019 7:49:24 PM	46870
4-Nitroaniline	ND	2.7	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Nitrobenzene	ND	2.8	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2-Nitrophenol	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
4-Nitrophenol	ND	7.6	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Pentachlorophenol	ND	2.7	20		µg/L	1	8/20/2019 7:49:24 PM	46870
Phenanthrene	ND	2.8	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Phenol	ND	8.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Pyrene	ND	2.5	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Pyridine	ND	9.6	10		µg/L	1	8/20/2019 7:49:24 PM	46870
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/20/2019 7:49:24 PM	46870
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/20/2019 7:49:24 PM	46870
Surr: 2-Fluorophenol	52.8	0	15-101		%Rec	1	8/20/2019 7:49:24 PM	46870
Surr: Phenol-d5	40.4	0	15-84.6		%Rec	1	8/20/2019 7:49:24 PM	46870
Surr: 2,4,6-Tribromophenol	62.9	0	27.8-112		%Rec	1	8/20/2019 7:49:24 PM	46870
Surr: Nitrobenzene-d5	78.9	0	33-113		%Rec	1	8/20/2019 7:49:24 PM	46870
Surr: 2-Fluorobiphenyl	70.4	0	26.6-107		%Rec	1	8/20/2019 7:49:24 PM	46870
Surr: 4-Terphenyl-d14	72.1	0	18.7-148		%Rec	1	8/20/2019 7:49:24 PM	46870
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Methyl tert-butyl ether (MTBE)	29	0.46	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2-Dichloroethane (EDC)	0.66	0.19	1.0	J	µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 5:40:00 PM	R62266

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 9:05:00 AM
Lab ID: 1908906-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Acetone	ND	1.2	10		µg/L	1	8/20/2019 5:40:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 5:40:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 5:40:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,1-Dichloroethane	0.91	0.14	1.0	J	µg/L	1	8/20/2019 5:40:00 PM	R62266
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 5:40:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 5:40:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 9:05:00 AM
Lab ID: 1908906-003
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 5:40:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 5:40:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	8/20/2019 5:40:00 PM	R62266
Surr: 4-Bromofluorobenzene	98.0	0	70-130		%Rec	1	8/20/2019 5:40:00 PM	R62266
Surr: Dibromofluoromethane	98.2	0	70-130		%Rec	1	8/20/2019 5:40:00 PM	R62266
Surr: Toluene-d8	97.8	0	70-130		%Rec	1	8/20/2019 5:40:00 PM	R62266

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 11:40:00 AM
Lab ID: 1908906-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	8/23/2019 1:20:19 AM	46979
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 12:05:18 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 12:05:18 PM	46893
Surr: DNOP	95.6	0	70-130		%Rec	1	8/20/2019 12:05:18 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 10:07:38 AM	A62420
Surr: BFB	96.2	0	65.8-143		%Rec	1	8/26/2019 10:07:38 AM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.26	0.073	0.50	J	mg/L	5	8/16/2019 3:23:59 PM	R62225
Chloride	110	10	10		mg/L	20	8/16/2019 3:36:50 PM	R62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 3:23:59 PM	R62225
Bromide	ND	0.089	0.50		mg/L	5	8/16/2019 3:23:59 PM	R62225
Nitrogen, Nitrate (As N)	0.26	0.025	0.50	J	mg/L	5	8/16/2019 3:23:59 PM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 3:23:59 PM	R62225
Sulfate	170	0.33	2.5		mg/L	5	8/16/2019 3:23:59 PM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.31	0.0025	0.020	*	mg/L	1	9/6/2019 4:16:15 PM	B62735
Barium	0.032	0.00065	0.0020		mg/L	1	9/6/2019 4:16:15 PM	B62735
Beryllium	ND	0.00028	0.0020		mg/L	1	9/6/2019 4:16:15 PM	B62735
Boron	0.36	0.0045	0.040		mg/L	1	9/6/2019 4:16:15 PM	B62735
Cadmium	ND	0.00055	0.0020		mg/L	1	9/6/2019 4:16:15 PM	B62735
Calcium	2.6	0.062	1.0		mg/L	1	9/6/2019 4:16:15 PM	B62735
Chromium	0.0048	0.0015	0.0060	J	mg/L	1	9/6/2019 4:16:15 PM	B62735
Cobalt	ND	0.0031	0.0060		mg/L	1	9/6/2019 4:16:15 PM	B62735
Copper	0.0027	0.0013	0.0060	J	mg/L	1	9/6/2019 4:16:15 PM	B62735
Iron	0.19	0.0087	0.020		mg/L	1	9/6/2019 4:16:15 PM	B62735
Magnesium	0.34	0.050	1.0	J	mg/L	1	9/6/2019 4:16:15 PM	B62735
Manganese	0.018	0.00029	0.0020		mg/L	1	9/6/2019 4:16:15 PM	B62735
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/6/2019 4:16:15 PM	B62735
Nickel	0.0049	0.0040	0.010	J	mg/L	1	9/6/2019 4:16:15 PM	B62735
Potassium	0.70	0.16	1.0	J	mg/L	1	9/6/2019 4:16:15 PM	B62735
Silver	ND	0.00094	0.0050		mg/L	1	9/6/2019 4:16:15 PM	B62735
Sodium	360	2.1	5.0		mg/L	5	9/6/2019 4:18:15 PM	B62735
Zinc	0.0078	0.0023	0.010	J	mg/L	1	9/6/2019 4:16:15 PM	B62735
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	12	0.050	0.40	*	mg/L	20	8/22/2019 7:45:16 PM	46967

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 11:40:00 AM
Lab ID: 1908906-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.16	0.00065	0.0020		mg/L	1	8/22/2019 6:24:49 PM	46967
Beryllium	0.00067	0.00028	0.0020	J	mg/L	1	8/22/2019 6:24:49 PM	46967
Boron	0.35	0.0045	0.040		mg/L	1	8/22/2019 6:24:49 PM	46967
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 6:24:49 PM	46967
Chromium	0.057	0.0015	0.0060		mg/L	1	8/22/2019 6:24:49 PM	46967
Cobalt	0.0033	0.0031	0.0060	J	mg/L	1	8/22/2019 6:24:49 PM	46967
Copper	0.0064	0.0041	0.0060		mg/L	1	8/22/2019 6:24:49 PM	46967
Iron	7.7	0.087	0.20	*	mg/L	10	8/22/2019 7:43:19 PM	46967
Manganese	0.33	0.00029	0.0020	*	mg/L	1	8/22/2019 6:24:49 PM	46967
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/22/2019 6:24:49 PM	46967
Nickel	0.048	0.0040	0.010		mg/L	1	8/22/2019 6:24:49 PM	46967
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 6:24:49 PM	46967
Zinc	0.083	0.0058	0.010		mg/L	1	8/22/2019 6:24:49 PM	46967
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.0011	0.00039	0.0010		mg/L	1	8/21/2019 11:17:25 PM	C62319
Arsenic	0.00083	0.00010	0.0010	J	mg/L	1	8/21/2019 11:17:25 PM	C62319
Lead	0.00046	0.000055	0.00050	J	mg/L	1	8/21/2019 11:17:25 PM	C62319
Selenium	0.0028	0.00017	0.0010		mg/L	1	8/21/2019 11:17:25 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 11:17:25 PM	C62319
Uranium	0.036	0.00037	0.0025	*	mg/L	5	8/30/2019 1:58:34 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 4:31:55 PM	46967
Arsenic	0.0030	0.00031	0.0010		mg/L	1	8/22/2019 4:31:55 PM	46967
Lead	0.012	0.000055	0.00050		mg/L	1	8/26/2019 2:20:36 PM	47036
Selenium	0.0046	0.00048	0.0010		mg/L	1	8/22/2019 4:31:55 PM	46967
Thallium	0.000074	0.000052	0.00050	J	mg/L	1	8/22/2019 4:31:55 PM	46967
Uranium	0.038	0.00042	0.0025	*	mg/L	5	9/5/2019 3:49:26 PM	47036
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	8/28/2019 7:01:50 PM	47129
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Methyl tert-butyl ether (MTBE)	1.9	0.46	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 11:40:00 AM
Lab ID: 1908906-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Acetone	ND	1.2	10		µg/L	1	8/20/2019 6:05:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 6:05:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 6:05:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 6:05:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 6:05:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 6:05:00 PM	R62266

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-01
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 11:40:00 AM
Lab ID: 1908906-004
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 6:05:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 6:05:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	8/20/2019 6:05:00 PM	R62266
Surr: 4-Bromofluorobenzene	97.3	0	70-130		%Rec	1	8/20/2019 6:05:00 PM	R62266
Surr: Dibromofluoromethane	99.6	0	70-130		%Rec	1	8/20/2019 6:05:00 PM	R62266
Surr: Toluene-d8	97.7	0	70-130		%Rec	1	8/20/2019 6:05:00 PM	R62266

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/23/2019 1:35:49 AM	46979
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 12:29:28 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 12:29:28 PM	46893
Surr: DNOP	103	0	70-130		%Rec	1	8/20/2019 12:29:28 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 10:30:31 AM	A62420
Surr: BFB	95.9	0	65.8-143		%Rec	1	8/26/2019 10:30:31 AM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.19	0.073	0.50	J	mg/L	5	8/16/2019 4:15:25 PM	R62225
Chloride	860	25	25		mg/L	50	8/28/2019 1:30:05 PM	R62484
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 4:15:25 PM	R62225
Bromide	1.0	0.089	0.50		mg/L	5	8/16/2019 4:15:25 PM	R62225
Nitrogen, Nitrate (As N)	0.75	0.025	0.50		mg/L	5	8/16/2019 4:15:25 PM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 4:15:25 PM	R62225
Sulfate	220	0.33	2.5		mg/L	5	8/16/2019 4:15:25 PM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/6/2019 4:20:24 PM	B62735
Barium	0.056	0.00065	0.0020		mg/L	1	9/6/2019 4:20:24 PM	B62735
Beryllium	ND	0.00028	0.0020		mg/L	1	9/6/2019 4:20:24 PM	B62735
Boron	0.53	0.0045	0.040		mg/L	1	9/6/2019 4:20:24 PM	B62735
Cadmium	ND	0.00055	0.0020		mg/L	1	9/6/2019 4:20:24 PM	B62735
Calcium	93	0.062	1.0		mg/L	1	9/6/2019 4:20:24 PM	B62735
Chromium	ND	0.0015	0.0060		mg/L	1	9/6/2019 4:20:24 PM	B62735
Cobalt	ND	0.0031	0.0060		mg/L	1	9/6/2019 4:20:24 PM	B62735
Copper	0.0033	0.0013	0.0060	J	mg/L	1	9/6/2019 4:20:24 PM	B62735
Iron	ND	0.0087	0.020		mg/L	1	9/6/2019 4:20:24 PM	B62735
Magnesium	15	0.050	1.0		mg/L	1	9/6/2019 4:20:24 PM	B62735
Manganese	0.093	0.00029	0.0020	*	mg/L	1	9/6/2019 4:20:24 PM	B62735
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/6/2019 4:20:24 PM	B62735
Nickel	ND	0.0040	0.010		mg/L	1	9/6/2019 4:20:24 PM	B62735
Potassium	1.2	0.16	1.0		mg/L	1	9/6/2019 4:20:24 PM	B62735
Silver	0.0020	0.00094	0.0050	J	mg/L	1	9/6/2019 4:20:24 PM	B62735
Sodium	670	4.2	10		mg/L	10	9/9/2019 2:13:51 PM	A62788
Zinc	0.0063	0.0023	0.010	J	mg/L	1	9/6/2019 4:20:24 PM	B62735
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.0057	0.0025	0.020	J	mg/L	1	8/22/2019 6:35:38 PM	46967

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ND	Not Detected at the Reporting Limit
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B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.054	0.00065	0.0020		mg/L	1	8/22/2019 6:35:38 PM	46967
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 6:35:38 PM	46967
Boron	0.51	0.0045	0.040		mg/L	1	8/22/2019 6:35:38 PM	46967
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 6:35:38 PM	46967
Chromium	ND	0.0015	0.0060		mg/L	1	8/22/2019 6:35:38 PM	46967
Cobalt	ND	0.0031	0.0060		mg/L	1	8/22/2019 6:35:38 PM	46967
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 6:35:38 PM	46967
Iron	ND	0.0087	0.020		mg/L	1	8/22/2019 6:35:38 PM	46967
Manganese	0.088	0.00029	0.0020	*	mg/L	1	8/22/2019 6:35:38 PM	46967
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/22/2019 6:35:38 PM	46967
Nickel	ND	0.0040	0.010		mg/L	1	8/22/2019 6:35:38 PM	46967
Silver	0.0018	0.0014	0.0050	J	mg/L	1	8/22/2019 6:35:38 PM	46967
Zinc	ND	0.0058	0.010		mg/L	1	8/22/2019 6:35:38 PM	46967
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 11:20:07 PM	C62319
Arsenic	0.00060	0.00010	0.0010	J	mg/L	1	8/21/2019 11:20:07 PM	C62319
Lead	0.00012	0.000055	0.00050	J	mg/L	1	8/21/2019 11:20:07 PM	C62319
Selenium	0.0079	0.00017	0.0010		mg/L	1	8/21/2019 11:20:07 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 11:20:07 PM	C62319
Uranium	0.048	0.00037	0.0025	*	mg/L	5	8/30/2019 2:01:16 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 4:34:07 PM	46967
Arsenic	0.00077	0.00031	0.0010	J	mg/L	1	8/22/2019 4:34:07 PM	46967
Lead	0.00013	0.000055	0.00050	J	mg/L	1	8/26/2019 2:24:59 PM	47036
Selenium	0.0096	0.00048	0.0010		mg/L	1	8/22/2019 4:34:07 PM	46967
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 4:34:07 PM	46967
Uranium	0.050	0.00042	0.0025	*	mg/L	5	9/5/2019 3:51:37 PM	47036
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	8/28/2019 7:04:03 PM	47129
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Methyl tert-butyl ether (MTBE)	10	0.46	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2-Dichloroethane (EDC)	0.36	0.19	1.0	J	µg/L	1	8/20/2019 6:29:00 PM	R62266

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Qualifiers:

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PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Acetone	1.4	1.2	10	J	µg/L	1	8/20/2019 6:29:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 6:29:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 6:29:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,1-Dichloroethane	0.79	0.14	1.0	J	µg/L	1	8/20/2019 6:29:00 PM	R62266
1,1-Dichloroethene	0.56	0.21	1.0	J	µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 6:29:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 6:29:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 6:29:00 PM	R62266

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-10
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-005
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 6:29:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 6:29:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/20/2019 6:29:00 PM	R62266
Surr: 4-Bromofluorobenzene	96.3	0	70-130		%Rec	1	8/20/2019 6:29:00 PM	R62266
Surr: Dibromofluoromethane	98.3	0	70-130		%Rec	1	8/20/2019 6:29:00 PM	R62266
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	8/20/2019 6:29:00 PM	R62266

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/23/2019 1:51:23 AM	46979
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 12:53:49 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 12:53:49 PM	46893
Surr: DNOP	103	0	70-130		%Rec	1	8/20/2019 12:53:49 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 10:53:18 AM	A62420
Surr: BFB	97.4	0	65.8-143		%Rec	1	8/26/2019 10:53:18 AM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.15	0.073	0.50	J	mg/L	5	8/16/2019 4:41:10 PM	R62225
Chloride	840	25	25		mg/L	50	8/28/2019 1:42:30 PM	R62484
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 4:41:10 PM	R62225
Bromide	0.97	0.089	0.50		mg/L	5	8/16/2019 4:41:10 PM	R62225
Nitrogen, Nitrate (As N)	0.74	0.025	0.50		mg/L	5	8/16/2019 4:41:10 PM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 4:41:10 PM	R62225
Sulfate	220	0.33	2.5		mg/L	5	8/16/2019 4:41:10 PM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/6/2019 4:24:44 PM	B62735
Barium	0.058	0.00065	0.0020		mg/L	1	9/6/2019 4:24:44 PM	B62735
Beryllium	ND	0.00028	0.0020		mg/L	1	9/6/2019 4:24:44 PM	B62735
Boron	0.53	0.0045	0.040		mg/L	1	9/6/2019 4:24:44 PM	B62735
Cadmium	ND	0.00055	0.0020		mg/L	1	9/6/2019 4:24:44 PM	B62735
Calcium	93	0.062	1.0		mg/L	1	9/6/2019 4:24:44 PM	B62735
Chromium	ND	0.0015	0.0060		mg/L	1	9/6/2019 4:24:44 PM	B62735
Cobalt	ND	0.0031	0.0060		mg/L	1	9/6/2019 4:24:44 PM	B62735
Copper	0.0042	0.0013	0.0060	J	mg/L	1	9/6/2019 4:24:44 PM	B62735
Iron	ND	0.0087	0.020		mg/L	1	9/6/2019 4:24:44 PM	B62735
Magnesium	15	0.050	1.0		mg/L	1	9/6/2019 4:24:44 PM	B62735
Manganese	0.094	0.00029	0.0020	*	mg/L	1	9/6/2019 4:24:44 PM	B62735
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/6/2019 4:24:44 PM	B62735
Nickel	ND	0.0040	0.010		mg/L	1	9/6/2019 4:24:44 PM	B62735
Potassium	1.2	0.16	1.0		mg/L	1	9/6/2019 4:24:44 PM	B62735
Silver	0.0017	0.00094	0.0050	J	mg/L	1	9/6/2019 4:24:44 PM	B62735
Sodium	650	4.2	10		mg/L	10	9/9/2019 2:16:08 PM	A62788
Zinc	0.0066	0.0023	0.010	J	mg/L	1	9/6/2019 4:24:44 PM	B62735
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	8/26/2019 2:44:43 PM	A62442

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PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.055	0.00065	0.0020		mg/L	1	8/26/2019 2:44:43 PM	A62442
Beryllium	ND	0.00028	0.0020		mg/L	1	8/26/2019 2:44:43 PM	A62442
Boron	0.50	0.0045	0.040		mg/L	1	8/26/2019 2:44:43 PM	A62442
Cadmium	ND	0.00074	0.0020		mg/L	1	8/26/2019 2:44:43 PM	A62442
Chromium	ND	0.0015	0.0060		mg/L	1	8/26/2019 2:44:43 PM	A62442
Cobalt	ND	0.0031	0.0060		mg/L	1	8/26/2019 2:44:43 PM	A62442
Copper	ND	0.0041	0.0060		mg/L	1	8/26/2019 2:44:43 PM	A62442
Iron	ND	0.0087	0.020		mg/L	1	8/26/2019 2:44:43 PM	A62442
Manganese	0.092	0.00029	0.0020	*	mg/L	1	8/26/2019 2:44:43 PM	A62442
Molybdenum	0.0067	0.0067	0.0080	J	mg/L	1	8/26/2019 2:44:43 PM	A62442
Nickel	ND	0.0040	0.010		mg/L	1	8/26/2019 2:44:43 PM	A62442
Silver	0.0021	0.0014	0.0050	J	mg/L	1	8/26/2019 2:44:43 PM	A62442
Zinc	ND	0.0058	0.010		mg/L	1	8/26/2019 2:44:43 PM	A62442
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/21/2019 11:22:49 PM	C62319
Arsenic	0.00067	0.00010	0.0010	J	mg/L	1	8/21/2019 11:22:49 PM	C62319
Lead	0.00011	0.000055	0.00050	J	mg/L	1	8/21/2019 11:22:49 PM	C62319
Selenium	0.0080	0.00017	0.0010		mg/L	1	8/21/2019 11:22:49 PM	C62319
Thallium	ND	0.000048	0.00050		mg/L	1	8/21/2019 11:22:49 PM	C62319
Uranium	0.047	0.00037	0.0025	*	mg/L	5	8/30/2019 2:06:43 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/20/2019 7:41:21 PM	C62284
Arsenic	0.00056	0.00031	0.0010	J	mg/L	1	8/21/2019 11:55:15 PM	D62319
Lead	0.00012	0.000055	0.00050	J	mg/L	1	8/21/2019 11:55:15 PM	D62319
Selenium	0.0068	0.0024	0.0050		mg/L	5	8/21/2019 11:52:33 PM	D62319
Thallium	ND	0.000052	0.00050		mg/L	1	8/21/2019 11:55:15 PM	D62319
Uranium	0.048	0.00042	0.0025	*	mg/L	5	8/28/2019 7:57:05 PM	C62501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	8/28/2019 7:06:16 PM	47129
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Toluene	ND	0.35	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Methyl tert-butyl ether (MTBE)	9.9	0.46	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2-Dichloroethane (EDC)	0.33	0.19	1.0	J	µg/L	1	8/20/2019 6:53:00 PM	R62266

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Naphthalene	ND	0.28	2.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Acetone	1.5	1.2	10	J	µg/L	1	8/20/2019 6:53:00 PM	R62266
Bromobenzene	ND	0.24	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Bromoform	ND	0.29	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Bromomethane	ND	0.27	3.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
2-Butanone	ND	2.1	10		µg/L	1	8/20/2019 6:53:00 PM	R62266
Carbon disulfide	ND	0.45	10		µg/L	1	8/20/2019 6:53:00 PM	R62266
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Chloroethane	ND	0.18	2.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Chloroform	ND	0.12	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Chloromethane	ND	0.32	3.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Dibromomethane	ND	0.21	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,1-Dichloroethane	0.75	0.14	1.0	J	µg/L	1	8/20/2019 6:53:00 PM	R62266
1,1-Dichloroethene	0.52	0.21	1.0	J	µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
2-Hexanone	ND	1.5	10		µg/L	1	8/20/2019 6:53:00 PM	R62266
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/20/2019 6:53:00 PM	R62266
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/20/2019 6:53:00 PM	R62266

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 12:40:00 PM
Lab ID: 1908906-006
Matrix: AQUEOUS
Received Date: 8/15/2019 4:30:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Styrene	ND	0.19	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/20/2019 6:53:00 PM	R62266
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/20/2019 6:53:00 PM	R62266
Surr: 1,2-Dichloroethane-d4	99.8	0	70-130		%Rec	1	8/20/2019 6:53:00 PM	R62266
Surr: 4-Bromofluorobenzene	96.8	0	70-130		%Rec	1	8/20/2019 6:53:00 PM	R62266
Surr: Dibromofluoromethane	97.6	0	70-130		%Rec	1	8/20/2019 6:53:00 PM	R62266
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	8/20/2019 6:53:00 PM	R62266

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46967** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **46967** RunNo: **62375**
Prep Date: **8/21/2019** Analysis Date: **8/22/2019** SeqNo: **2120099** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	0.022	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-46967** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **46967** RunNo: **62375**
Prep Date: **8/21/2019** Analysis Date: **8/22/2019** SeqNo: **2120101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.014	0.020	0.01000	0	135	50	150			J
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Beryllium	0.0019	0.0020	0.002000	0	97.1	50	150			J
Boron	0.040	0.040	0.04000	0	100	50	150			
Cadmium	0.0019	0.0020	0.002000	0	97.4	50	150			J
Chromium	0.0060	0.0060	0.006000	0	99.9	50	150			J
Cobalt	0.0070	0.0060	0.006000	0	117	50	150			
Copper	0.0064	0.0060	0.006000	0	106	50	150			
Iron	0.020	0.020	0.02000	0	99.3	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0083	0.0080	0.008000	0	104	50	150			
Nickel	0.0041	0.010	0.005000	0	81.8	50	150			J
Silver	0.0048	0.0050	0.005000	0	95.7	50	150			J
Zinc	0.014	0.010	0.01000	0	140	50	150			

Sample ID: **LCS-46967** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **46967** RunNo: **62375**
Prep Date: **8/21/2019** Analysis Date: **8/22/2019** SeqNo: **2120103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**

19-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-46967**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **46967**	RunNo: **62375**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2120103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	104	85	115			
Barium	0.48	0.0020	0.5000	0	95.2	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.4	85	115			
Boron	0.49	0.040	0.5000	0	99.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.2	85	115			
Chromium	0.50	0.0060	0.5000	0	101	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.0	85	115			
Copper	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	96.6	85	115			
Molybdenum	0.50	0.0080	0.5000	0	101	85	115			
Nickel	0.49	0.010	0.5000	0	97.6	85	115			
Silver	0.097	0.0050	0.1000	0	97.1	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID: **MB-46967**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **46967**	RunNo: **62375**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2120130** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0034	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	0.020	0.020								J
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123347** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123347** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0092	0.020	0.01000	0	91.5	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0018	0.0020	0.002000	0	90.9	50	150			J
Boron	0.038	0.040	0.04000	0	96.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Cobalt	0.0052	0.0060	0.006000	0	86.7	50	150			J
Copper	0.0056	0.0060	0.006000	0	92.6	50	150			J
Iron	0.020	0.020	0.02000	0	100	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.8	50	150			J
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0064	0.010	0.005000	0	128	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.6	50	150			J
Zinc	0.010	0.010	0.01000	0	99.8	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62442**	RunNo: **62442**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2123349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **A62442** RunNo: **62442**
Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.47	0.0020	0.5000	0	94.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.49	0.040	0.5000	0	97.8	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.7	85	115			
Copper	0.48	0.0060	0.5000	0	96.8	85	115			
Iron	0.49	0.020	0.5000	0	98.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.3	85	115			
Nickel	0.48	0.010	0.5000	0	95.5	85	115			
Silver	0.096	0.0050	0.1000	0	96.2	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A62788** RunNo: **62788**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139048** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **A62788** RunNo: **62788**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.56	1.0	0.5000	0	112	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **A62788** RunNo: **62788**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0098	0.020	0.01000	0	98.0	50	150			J
Barium	0.0019	0.0020	0.002000	0	92.8	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Boron	0.039	0.040	0.04000	0	97.8	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	90.8	50	150			J
Calcium	0.52	1.0	0.5000	0	105	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.2	50	150			J
Cobalt	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0059	0.0060	0.006000	0	98.0	50	150			J
Iron	0.017	0.020	0.02000	0	85.5	50	150			J
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.0076	0.0080	0.008000	0	94.5	50	150			J
Nickel	0.0052	0.010	0.005000	0	103	50	150			J
Potassium	0.42	1.0	0.5000	0	84.7	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0048	0.0050	0.005000	0	96.7	50	150			J
Sodium	0.54	1.0	0.5000	0	107	50	150			J
Zinc	0.011	0.010	0.01000	0	112	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62735**	RunNo: **62735**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	85	115			
Barium	0.47	0.0020	0.5000	0	94.0	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.8	85	115			
Boron	0.48	0.040	0.5000	0	96.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.9	85	115			
Calcium	49	1.0	50.00	0	98.9	85	115			
Chromium	0.48	0.0060	0.5000	0	95.4	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.48	0.020	0.5000	0	95.8	85	115			
Magnesium	49	1.0	50.00	0	98.6	85	115			
Manganese	0.49	0.0020	0.5000	0	98.0	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.2	85	115			
Nickel	0.47	0.010	0.5000	0	93.0	85	115			
Potassium	49	1.0	50.00	0	97.5	85	115			
Silver	0.098	0.0050	0.1000	0	98.4	85	115			
Sodium	50	1.0	50.00	0	99.1	85	115			
Zinc	0.48	0.010	0.5000	0	95.7	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.56	1.0	0.5000	0	112	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139053** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **C62284**	RunNo: **62284**							
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116312**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C62284**	RunNo: **62284**							
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116313**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00080	0.0010	0.001000	0	80.4	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C62284**	RunNo: **62284**							
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116314**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	103	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117863**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117864**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.8	50	150			J
Selenium	0.0010	0.0010	0.001000	0	99.7	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	93.8	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **D62319**	RunNo: **62319**							
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2117865**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.0	85	115			
Lead	0.012	0.00050	0.01250	0	93.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.7	85	115			
Thallium	0.012	0.00050	0.01250	0	93.6	85	115			

Sample ID: **MB-46967**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **46967**	RunNo: **62354**							
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2118805**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **MSLLLCS-46967**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **46967**	RunNo: **62354**							
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2118807**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00086	0.0010	0.001000	0	85.9	50	150			J
Arsenic	0.0011	0.0010	0.001000	0	108	50	150			
Selenium	0.0011	0.0010	0.001000	0	107	50	150			
Thallium	0.00045	0.00050	0.0005000	0	90.0	50	150			J

Sample ID: **MSLCS-46967**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **46967**	RunNo: **62354**							
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2118812**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	103	85	115			
Arsenic	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.024	0.0010	0.02500	0	94.7	85	115			
Thallium	0.012	0.00050	0.01250	0	95.8	85	115			

Sample ID: **MB-47036**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **47036**	RunNo: **62421**							
Prep Date: **8/25/2019**	Analysis Date: **8/26/2019**	SeqNo: **2121998**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-47036**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **47036**	RunNo: **62421**							
Prep Date: **8/25/2019**	Analysis Date: **8/26/2019**	SeqNo: **2121998**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-47036**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **47036**	RunNo: **62421**							
Prep Date: **8/25/2019**	Analysis Date: **8/26/2019**	SeqNo: **2122000**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00052	0.00050	0.0005000	0	103	50	150			
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J

Sample ID: **MSLCS-47036**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **47036**	RunNo: **62421**							
Prep Date: **8/25/2019**	Analysis Date: **8/26/2019**	SeqNo: **2122002**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	103	85	115			
Uranium	0.012	0.00050	0.01250	0	99.1	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126594**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126595**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126596**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117837** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00075	0.0010	0.001000	0	75.3	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00050	0.00050	0.0005000	0	100	50	150			J
Selenium	0.00097	0.0010	0.001000	0	97.0	50	150			J
Thallium	0.00048	0.00050	0.0005000	0	95.3	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117838** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.9	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.9	85	115			
Lead	0.012	0.00050	0.01250	0	95.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.3	85	115			
Thallium	0.012	0.00050	0.01250	0	95.0	85	115			

Sample ID: **1908906-003FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BW-5C** Batch ID: **C62319** RunNo: **62319**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2117859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.0003782	108	70	130			
Lead	0.011	0.00050	0.01250	0	86.6	70	130			
Selenium	0.026	0.0010	0.02500	0.0007346	102	70	130			
Thallium	0.011	0.00050	0.01250	0	87.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122197** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00086	0.0010	0.001000	0	86.4	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122198** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.5	85	115			

Sample ID: **1908906-003FMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BW-5C**	Batch ID: **B62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122703** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.13	0.0050	0.1250	0	100	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126473** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126474** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00056	0.00050	0.0005000	0	112	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126475** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.014	0.00050	0.01250	0	108	85	115			

Sample ID: **1908906-003FMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BW-5C**	Batch ID: **A62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.11	0.0025	0.06250	0.04622	105	70	130			

Sample ID: **1908906-003FMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BW-5C**	Batch ID: **A62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.11	0.0025	0.06250	0.04622	103	70	130	0.804	20	

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128563** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	99.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-47129**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **47129**	RunNo: **62486**
Prep Date: **8/28/2019**	Analysis Date: **8/28/2019**	SeqNo: **2125380** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-47129**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **47129**	RunNo: **62486**
Prep Date: **8/28/2019**	Analysis Date: **8/28/2019**	SeqNo: **2125381** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R62225**	RunNo: **62225**							
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113414**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R62225**	RunNo: **62225**							
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113415**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.7	0.50	5.000	0	94.7	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Bromide	2.4	0.10	2.500	0	96.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.9	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.3	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R62484**	RunNo: **62484**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125320**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R62484**	RunNo: **62484**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125321**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46979**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **46979**	RunNo: **62366**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119534** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-46979**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **46979**	RunNo: **62366**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119536** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.099	0.010	0.1000	0	98.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908906-003BMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **BW-5C** Batch ID: **46893** RunNo: **62247**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	90.6	68.1	137			
Surr: DNOP	0.42		0.5000		83.6	70	130			

Sample ID: **1908906-003BMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **BW-5C** Batch ID: **46893** RunNo: **62247**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.1	68.1	137	8.91	20	
Surr: DNOP	0.44		0.5000		88.7	70	130	0	0	

Sample ID: **LCS-46893** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **46893** RunNo: **62247**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115351** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	89.5	71.8	135			
Surr: DNOP	0.43		0.5000		85.2	70	130			

Sample ID: **MB-46893** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW** Batch ID: **46893** RunNo: **62247**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.95		1.000		94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

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Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122301** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.3	65.8	143			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122302** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.7	73.6	119			
Surr: BFB	23		20.00		116	65.8	143			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**

19-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115960** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.4	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.2	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.9	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	0.51	10								J
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62266**	RunNo: **62266**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2115961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.3	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**

19-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcs-46870**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115954** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.3	32.2	94			
4-Chloro-3-methylphenol	160	10	200.0	0	82.1	37.7	101			
2-Chlorophenol	170	10	200.0	0	83.4	32.6	90.1			
1,4-Dichlorobenzene	71	10	100.0	0	71.2	30	87.2			
2,4-Dinitrotoluene	65	10	100.0	0	65.1	35.9	85.8			
N-Nitrosodi-n-propylamine	90	10	100.0	0	90.3	37.1	108			
4-Nitrophenol	94	10	200.0	0	46.9	22.4	86.6			
Pentachlorophenol	120	20	200.0	0	61.7	31.6	91			
Phenol	120	10	200.0	0	58.4	21.7	84.9			
Pyrene	81	10	100.0	0	81.1	46.3	103			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.3	30.2	88.3			
Surr: 2-Fluorophenol	110		200.0		56.4	15	101			
Surr: Phenol-d5	92		200.0		45.8	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		61.2	27.8	112			
Surr: Nitrobenzene-d5	78		100.0		78.2	33	113			
Surr: 2-Fluorobiphenyl	62		100.0		62.1	26.6	107			
Surr: 4-Terphenyl-d14	66		100.0		65.6	18.7	148			

Sample ID: **lcsd-46870**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115955** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.6	32.2	94	4.93	32.9	
4-Chloro-3-methylphenol	160	10	200.0	0	80.4	37.7	101	2.07	29.9	
2-Chlorophenol	150	10	200.0	0	76.9	32.6	90.1	8.13	28.5	
1,4-Dichlorobenzene	71	10	100.0	0	71.2	15	87.2	0.0562	44.9	
2,4-Dinitrotoluene	68	10	100.0	0	67.6	35.9	85.8	3.74	28.5	
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.0	37.1	108	8.47	29.9	
4-Nitrophenol	91	10	200.0	0	45.3	15	86.6	3.53	68	
Pentachlorophenol	110	20	200.0	0	56.6	31.6	91	8.74	39.5	
Phenol	110	10	200.0	0	53.9	15	84.9	7.96	44.2	
Pyrene	76	10	100.0	0	75.8	46.3	103	6.81	23.8	
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	15.7	88.3	1.68	38	
Surr: 2-Fluorophenol	100		200.0		51.3	15	101	0	0	
Surr: Phenol-d5	80		200.0		39.8	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		55.1	27.8	112	0	0	
Surr: Nitrobenzene-d5	75		100.0		75.1	33	113	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		62.8	26.6	107	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
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Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcsd-46870**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115955** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	64		100.0		64.0	18.7	148	0	0	

Sample ID: **mb-46870**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-46870**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46870**	RunNo: **62264**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	4.4	20								J
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908906**
19-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-46870** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **46870** RunNo: **62264**
Prep Date: **8/19/2019** Analysis Date: **8/20/2019** SeqNo: **2115956** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.3	15	101			
Surr: Phenol-d5	96		200.0		48.0	15	84.6			
Surr: 2,4,6-Tribromophenol	130		200.0		66.0	27.8	112			
Surr: Nitrobenzene-d5	99		100.0		99.2	33	113			
Surr: 2-Fluorobiphenyl	84		100.0		83.9	26.6	107			
Surr: 4-Terphenyl-d14	72		100.0		72.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1908906** RcptNo: **1**

Received By: **Erin Melendrez** **8/15/2019 4:30:00 PM**

Completed By: **Erin Melendrez** **8/15/2019 6:32:31 PM**

Reviewed By: ENM 8/16/19

LB 8/16/19 took unpreserved back @ 8046 @ 8/16/19 of 40

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑

    # of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐

    Adjusted? _____
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

    Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:	Cheryl Johnson	Date:	8/15/19 8/16/19
By Whom:	Anne Erin Leah	Via:	☒ eMail ☒ Phone ☐ Fax ☐ In Person
Regarding:	Several discrepancies		
Client Instructions:	see correction to COC		

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			
2	2.6	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2019 ANNUAL/3Rd QTR GW SAMPLING

Project #:

OW/MW/SMW WELLS

Project Manager:

BRIAN MOORE (BMOORE1@MARATHONPETROLEUM.COM)

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: X Yes ☐ No

Sample Temperature: 2.5+0.2(CF)=2.7°C 2.4+0.2(CF)=2.6°C

HEAL No. 1908906

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	Analysis Request: 8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Air Bubbles (Y or N)
8/15/2019	700	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X								
8/15/2019	700	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X								
8/15/2019	905	AQUEOUS	BW-5C	MISC	MISC	-003	X	X	X	X	X	X			
~~8/15/2019~~		~~AQUEOUS~~	~~BW-5B~~	~~MISC~~	~~MISC~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~EDB 8/15/19~~		
8/15/2019	1140	AQUEOUS	OW-01	MISC	MISC	-004	X	X		X	X	X	X		
8/15/2019	1240	AQUEOUS	OW-10	MISC	MISC	-005	X	X		X	X	X	X		
8/15/2019	1240	AQUEOUS	Duplicate ~~OW-10~~	MISC	MISC	-006	X	X		X	X	X	X		
~~8/15/2019~~	~~1111~~	~~AQUEOUS~~	DUPLICATE	MISC	MISC	-007	X	X		X	X	X			
	~~1240~~			~~A~~ 08116119											

Date: 8/15/19 Time: 1410 Relinquished by: Received by: Date Time 8/15/19 1631

Date: 8/15/19 Time: 1630 Relinquished by: Received by: Date Time 8/15/19 1630

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 26, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 Annual 3rd QTR GW Sampling OrderNo.: 1908952

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/16/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1908952**
Date: **9/26/2019**

CLIENT: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Analytical Notes Regarding EPA Method 8011/504.1:
A trip blank was not provided for this method.

Analytical Notes Regarding EPA Method 8270:
The LCSD had low recoveries for pentachlorophenol and 4-Nitrophenol. All other compounds had acceptable recoveries. The LCS had acceptable recoveries for all compounds.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 8:00:00 AM
Lab ID: 1908952-001
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Toluene	ND	0.35	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Acetone	ND	1.2	10		µg/L	1	8/23/2019 12:22:00 AM	B62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 12:22:00 AM	B62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 12:22:00 AM	B62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Chloroform	ND	0.12	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 12:22:00 AM	B62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 8:00:00 AM
Lab ID: 1908952-001
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 12:22:00 AM	B62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 12:22:00 AM	B62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Styrene	ND	0.19	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 12:22:00 AM	B62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/23/2019 12:22:00 AM	B62329
Surr: 1,2-Dichloroethane-d4	96.8	0	70-130		%Rec	1	8/23/2019 12:22:00 AM	B62329
Surr: 4-Bromofluorobenzene	99.6	0	70-130		%Rec	1	8/23/2019 12:22:00 AM	B62329
Surr: Dibromofluoromethane	95.5	0	70-130		%Rec	1	8/23/2019 12:22:00 AM	B62329
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	8/23/2019 12:22:00 AM	B62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 8:00:00 AM
Lab ID: 1908952-002
Matrix: TRIP BLANK
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Toluene	0.53	0.35	1.0	J	µg/L	1	8/23/2019 12:46:00 AM	B62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Acetone	ND	1.2	10		µg/L	1	8/23/2019 12:46:00 AM	B62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 12:46:00 AM	B62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 12:46:00 AM	B62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Chlorobenzene	0.64	0.19	1.0	J	µg/L	1	8/23/2019 12:46:00 AM	B62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Chloroform	ND	0.12	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 12:46:00 AM	B62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 8:00:00 AM
Lab ID: 1908952-002
Matrix: TRIP BLANK
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 12:46:00 AM	B62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 12:46:00 AM	B62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Styrene	ND	0.19	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 12:46:00 AM	B62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/23/2019 12:46:00 AM	B62329
Surr: 1,2-Dichloroethane-d4	98.3	0	70-130		%Rec	1	8/23/2019 12:46:00 AM	B62329
Surr: 4-Bromofluorobenzene	95.5	0	70-130		%Rec	1	8/23/2019 12:46:00 AM	B62329
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	1	8/23/2019 12:46:00 AM	B62329
Surr: Toluene-d8	97.5	0	70-130		%Rec	1	8/23/2019 12:46:00 AM	B62329

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 2:48:00 PM
Lab ID: 1908952-003
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 2:31:29 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 2:31:29 PM	46893
Surr: DNOP	102	0	70-130		%Rec	1	8/20/2019 2:31:29 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 11:16:21 AM	A62420
Surr: BFB	99.9	0	65.8-143		%Rec	1	8/26/2019 11:16:21 AM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.17	0.073	0.50	J	mg/L	5	8/16/2019 9:37:12 PM	R62225
Chloride	490	25	25	*	mg/L	50	8/28/2019 1:54:55 PM	R62484
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 9:37:12 PM	R62225
Bromide	0.54	0.089	0.50		mg/L	5	8/16/2019 9:37:12 PM	R62225
Nitrogen, Nitrate (As N)	0.11	0.025	0.50	J	mg/L	5	8/16/2019 9:37:12 PM	R62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 9:37:12 PM	R62225
Sulfate	92	0.33	2.5		mg/L	5	8/16/2019 9:37:12 PM	R62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.043	0.0025	0.020		mg/L	1	9/10/2019 2:18:36 PM	A62802
Barium	0.16	0.00065	0.0020		mg/L	1	9/10/2019 2:18:36 PM	A62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 2:18:36 PM	A62802
Boron	0.37	0.0045	0.040		mg/L	1	9/10/2019 2:18:36 PM	A62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 2:18:36 PM	A62802
Calcium	6.2	0.062	1.0		mg/L	1	9/10/2019 2:18:36 PM	A62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 2:18:36 PM	A62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 2:18:36 PM	A62802
Copper	0.0028	0.0013	0.0060	J	mg/L	1	9/10/2019 2:18:36 PM	A62802
Iron	0.012	0.0087	0.020	J	mg/L	1	9/10/2019 2:18:36 PM	A62802
Magnesium	0.62	0.050	1.0	J	mg/L	1	9/10/2019 2:18:36 PM	A62802
Manganese	0.012	0.00029	0.0020		mg/L	1	9/10/2019 2:18:36 PM	A62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 2:18:36 PM	A62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 2:18:36 PM	A62802
Potassium	1.1	0.16	1.0		mg/L	1	9/10/2019 2:18:36 PM	A62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 2:18:36 PM	A62802
Sodium	480	4.2	10		mg/L	10	9/14/2019 10:07:28 AM	A62943
Zinc	0.0052	0.0023	0.010	J	mg/L	1	9/10/2019 2:18:36 PM	A62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.4	0.012	0.10	*	mg/L	5	8/22/2019 9:03:23 PM	46990
Barium	0.18	0.00065	0.0020		mg/L	1	8/22/2019 9:01:26 PM	46990
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 9:01:26 PM	46990

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 2:48:00 PM
Lab ID: 1908952-003
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.35	0.0045	0.040		mg/L	1	8/22/2019 9:01:26 PM	46990
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 9:01:26 PM	46990
Chromium	0.0027	0.0015	0.0060	J	mg/L	1	8/22/2019 9:01:26 PM	46990
Cobalt	ND	0.0031	0.0060		mg/L	1	8/22/2019 9:01:26 PM	46990
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 9:01:26 PM	46990
Iron	1.3	0.044	0.10	*	mg/L	5	8/22/2019 9:03:23 PM	46990
Manganese	0.028	0.00029	0.0020		mg/L	1	8/22/2019 9:01:26 PM	46990
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/22/2019 9:01:26 PM	46990
Nickel	ND	0.0040	0.010		mg/L	1	8/22/2019 9:01:26 PM	46990
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 9:01:26 PM	46990
Zinc	0.0060	0.0058	0.010	J	mg/L	1	8/22/2019 9:01:26 PM	46990
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/26/2019 11:21:53 PM	D62426
Arsenic	0.0013	0.00050	0.0050	J	mg/L	5	8/28/2019 6:03:33 PM	B62501
Lead	ND	0.00027	0.0025		mg/L	5	8/28/2019 6:03:33 PM	B62501
Selenium	0.0018	0.00086	0.0050	J	mg/L	5	8/28/2019 6:03:33 PM	B62501
Thallium	ND	0.00024	0.0025		mg/L	5	8/28/2019 6:03:33 PM	B62501
Uranium	0.029	0.00037	0.0025		mg/L	5	8/30/2019 2:25:45 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 6:14:59 PM	46990
Arsenic	0.0015	0.00031	0.0010		mg/L	1	8/22/2019 6:14:59 PM	46990
Lead	0.00051	0.000055	0.00050		mg/L	1	8/22/2019 6:14:59 PM	46990
Selenium	0.0014	0.00048	0.0010		mg/L	1	8/22/2019 6:14:59 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 6:14:59 PM	46990
Uranium	0.029	0.00042	0.0025		mg/L	5	8/23/2019 3:40:06 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	9/5/2019 11:30:59 AM	47281
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 12:31:25 PM	46954

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 2:48:00 PM
Lab ID: 1908952-003
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 12:31:25 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 12:31:25 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 12:31:25 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 12:31:25 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 12:31:25 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 12:31:25 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 12:31:25 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 12:31:25 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 12:31:25 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 12:31:25 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 12:31:25 PM	46954

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 2:48:00 PM
Lab ID: 1908952-003
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 12:31:25 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 12:31:25 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 12:31:25 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Naphthalene	ND	4.1	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 12:31:25 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 12:31:25 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 12:31:25 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 12:31:25 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 12:31:25 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 12:31:25 PM	46954
Surr: 2-Fluorophenol	51.7	0	15-101		%Rec	1	8/27/2019 12:31:25 PM	46954
Surr: Phenol-d5	40.6	0	15-84.6		%Rec	1	8/27/2019 12:31:25 PM	46954
Surr: 2,4,6-Tribromophenol	59.8	0	27.8-112		%Rec	1	8/27/2019 12:31:25 PM	46954
Surr: Nitrobenzene-d5	76.7	0	33-113		%Rec	1	8/27/2019 12:31:25 PM	46954
Surr: 2-Fluorobiphenyl	66.6	0	26.6-107		%Rec	1	8/27/2019 12:31:25 PM	46954
Surr: 4-Terphenyl-d14	70.4	0	18.7-148		%Rec	1	8/27/2019 12:31:25 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Methyl tert-butyl ether (MTBE)	9.2	0.46	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 3:30:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 2:48:00 PM
Lab ID: 1908952-003
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Acetone	ND	1.2	10		µg/L	1	8/22/2019 3:30:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 3:30:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 3:30:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 3:30:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 3:30:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/15/2019 2:48:00 PM
Lab ID: 1908952-003
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 3:30:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 3:30:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	99.5	0	70-130		%Rec	1	8/22/2019 3:30:00 PM	R62329
Surr: 4-Bromofluorobenzene	96.7	0	70-130		%Rec	1	8/22/2019 3:30:00 PM	R62329
Surr: Dibromofluoromethane	97.8	0	70-130		%Rec	1	8/22/2019 3:30:00 PM	R62329
Surr: Toluene-d8	97.7	0	70-130		%Rec	1	8/22/2019 3:30:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 10:37:00 AM
Lab ID: 1908952-004
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	8/23/2019 2:06:50 AM	46979
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 2:55:52 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 2:55:52 PM	46893
Surr: DNOP	114	0	70-130		%Rec	1	8/20/2019 2:55:52 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 11:39:15 AM	A62420
Surr: BFB	99.6	0	65.8-143		%Rec	1	8/26/2019 11:39:15 AM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.48	0.073	0.50	J	mg/L	5	8/16/2019 10:28:39 PM	A62225
Chloride	40	2.5	2.5		mg/L	5	8/16/2019 10:28:39 PM	A62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 10:28:39 PM	A62225
Bromide	0.41	0.089	0.50	J	mg/L	5	8/16/2019 10:28:39 PM	A62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 10:28:39 PM	A62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 10:28:39 PM	A62225
Sulfate	160	0.33	2.5		mg/L	5	8/16/2019 10:28:39 PM	A62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 2:22:52 PM	A62802
Barium	0.051	0.00065	0.0020		mg/L	1	9/10/2019 2:22:52 PM	A62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 2:22:52 PM	A62802
Boron	0.37	0.0045	0.040		mg/L	1	9/10/2019 2:22:52 PM	A62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 2:22:52 PM	A62802
Calcium	27	0.062	1.0		mg/L	1	9/10/2019 2:22:52 PM	A62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 2:22:52 PM	A62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 2:22:52 PM	A62802
Copper	0.0017	0.0013	0.0060	J	mg/L	1	9/10/2019 2:22:52 PM	A62802
Iron	ND	0.0087	0.020		mg/L	1	9/10/2019 2:22:52 PM	A62802
Magnesium	4.6	0.050	1.0		mg/L	1	9/10/2019 2:22:52 PM	A62802
Manganese	0.11	0.00029	0.0020	*	mg/L	1	9/10/2019 2:22:52 PM	A62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 2:22:52 PM	A62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 2:22:52 PM	A62802
Potassium	0.41	0.16	1.0	J	mg/L	1	9/10/2019 2:22:52 PM	A62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 2:22:52 PM	A62802
Sodium	260	2.1	5.0		mg/L	5	9/10/2019 2:24:59 PM	A62802
Zinc	0.011	0.0023	0.010		mg/L	1	9/10/2019 2:22:52 PM	A62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.13	0.0025	0.020		mg/L	1	8/22/2019 9:05:38 PM	46990

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PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 10:37:00 AM
Lab ID: 1908952-004
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.051	0.00065	0.0020		mg/L	1	8/22/2019 9:05:38 PM	46990
Beryllium	ND	0.00028	0.0020		mg/L	1	8/22/2019 9:05:38 PM	46990
Boron	0.35	0.0045	0.040		mg/L	1	8/22/2019 9:05:38 PM	46990
Cadmium	ND	0.00074	0.0020		mg/L	1	8/22/2019 9:05:38 PM	46990
Chromium	ND	0.0015	0.0060		mg/L	1	8/22/2019 9:05:38 PM	46990
Cobalt	ND	0.0031	0.0060		mg/L	1	8/22/2019 9:05:38 PM	46990
Copper	ND	0.0041	0.0060		mg/L	1	8/22/2019 9:05:38 PM	46990
Iron	0.049	0.0087	0.020		mg/L	1	8/22/2019 9:05:38 PM	46990
Manganese	0.11	0.00029	0.0020	*	mg/L	1	8/22/2019 9:05:38 PM	46990
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/22/2019 9:05:38 PM	46990
Nickel	ND	0.0040	0.010		mg/L	1	8/22/2019 9:05:38 PM	46990
Silver	ND	0.0014	0.0050		mg/L	1	8/22/2019 9:05:38 PM	46990
Zinc	0.0061	0.0058	0.010	J	mg/L	1	8/22/2019 9:05:38 PM	46990
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/26/2019 11:24:35 PM	D62426
Arsenic	0.0021	0.00010	0.0010		mg/L	1	8/26/2019 11:24:35 PM	D62426
Lead	ND	0.000055	0.00050		mg/L	1	8/28/2019 6:06:16 PM	B62501
Selenium	ND	0.00017	0.0010		mg/L	1	8/26/2019 11:24:35 PM	D62426
Thallium	ND	0.000048	0.00050		mg/L	1	8/28/2019 6:06:16 PM	B62501
Uranium	0.012	0.000075	0.00050		mg/L	1	8/30/2019 2:28:28 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/22/2019 6:17:11 PM	46990
Arsenic	0.0023	0.00031	0.0010		mg/L	1	8/22/2019 6:17:11 PM	46990
Lead	0.000062	0.000055	0.00050	J	mg/L	1	8/22/2019 6:17:11 PM	46990
Selenium	ND	0.00048	0.0010		mg/L	1	8/22/2019 6:17:11 PM	46990
Thallium	ND	0.000052	0.00050		mg/L	1	8/22/2019 6:17:11 PM	46990
Uranium	0.012	0.000085	0.00050		mg/L	1	8/23/2019 3:42:17 PM	46990
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000083	0.000038	0.00020	J	mg/L	1	9/5/2019 11:33:13 AM	47281
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Methyl tert-butyl ether (MTBE)	21	0.46	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329

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Qualifiers:

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ND	Not Detected at the Reporting Limit
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B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 10:37:00 AM
Lab ID: 1908952-004 **Matrix:** AQUEOUS **Received Date:** 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Acetone	1.5	1.2	10	J	µg/L	1	8/22/2019 3:54:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 3:54:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 3:54:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 3:54:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 3:54:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 3:54:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-50
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 10:37:00 AM
Lab ID: 1908952-004
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 3:54:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 3:54:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	99.3	0	70-130		%Rec	1	8/22/2019 3:54:00 PM	R62329
Surr: 4-Bromofluorobenzene	97.3	0	70-130		%Rec	1	8/22/2019 3:54:00 PM	R62329
Surr: Dibromofluoromethane	96.7	0	70-130		%Rec	1	8/22/2019 3:54:00 PM	R62329
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	8/22/2019 3:54:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-005
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	8/23/2019 2:22:22 AM	46979
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 3:20:24 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 3:20:24 PM	46893
Surr: DNOP	112	0	70-130		%Rec	1	8/20/2019 3:20:24 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 12:02:09 PM	A62420
Surr: BFB	96.7	0	65.8-143		%Rec	1	8/26/2019 12:02:09 PM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.53	0.073	0.50		mg/L	5	8/16/2019 10:54:22 PM	A62225
Chloride	27	2.5	2.5		mg/L	5	8/16/2019 10:54:22 PM	A62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 10:54:22 PM	A62225
Bromide	ND	0.089	0.50		mg/L	5	8/16/2019 10:54:22 PM	A62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 10:54:22 PM	A62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 10:54:22 PM	A62225
Sulfate	140	0.33	2.5		mg/L	5	8/16/2019 10:54:22 PM	A62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.0041	0.0025	0.020	J	mg/L	1	9/10/2019 2:27:10 PM	A62802
Barium	0.028	0.00065	0.0020		mg/L	1	9/10/2019 2:27:10 PM	A62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 2:27:10 PM	A62802
Boron	0.37	0.0045	0.040		mg/L	1	9/10/2019 2:27:10 PM	A62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 2:27:10 PM	A62802
Calcium	4.9	0.062	1.0		mg/L	1	9/10/2019 2:27:10 PM	A62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 2:27:10 PM	A62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 2:27:10 PM	A62802
Copper	0.0019	0.0013	0.0060	J	mg/L	1	9/10/2019 2:27:10 PM	A62802
Iron	0.044	0.0087	0.020		mg/L	1	9/10/2019 2:27:10 PM	A62802
Magnesium	0.63	0.050	1.0	J	mg/L	1	9/10/2019 2:27:10 PM	A62802
Manganese	0.024	0.00029	0.0020		mg/L	1	9/10/2019 2:27:10 PM	A62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 2:27:10 PM	A62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 2:27:10 PM	A62802
Potassium	1.2	0.16	1.0		mg/L	1	9/10/2019 2:27:10 PM	A62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 2:27:10 PM	A62802
Sodium	250	2.1	5.0		mg/L	5	9/10/2019 2:29:16 PM	A62802
Zinc	0.019	0.0023	0.010		mg/L	1	9/10/2019 2:27:10 PM	A62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.0097	0.0025	0.020	J	mg/L	1	8/26/2019 2:46:53 PM	A62442

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-005
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.028	0.00065	0.0020		mg/L	1	8/26/2019 2:46:53 PM	A62442
Beryllium	ND	0.00028	0.0020		mg/L	1	8/26/2019 2:46:53 PM	A62442
Boron	0.35	0.0045	0.040		mg/L	1	8/26/2019 2:46:53 PM	A62442
Cadmium	ND	0.00074	0.0020		mg/L	1	8/26/2019 2:46:53 PM	A62442
Chromium	ND	0.0015	0.0060		mg/L	1	8/26/2019 2:46:53 PM	A62442
Cobalt	ND	0.0031	0.0060		mg/L	1	8/26/2019 2:46:53 PM	A62442
Copper	ND	0.0041	0.0060		mg/L	1	8/26/2019 2:46:53 PM	A62442
Iron	0.049	0.0087	0.020		mg/L	1	8/26/2019 2:46:53 PM	A62442
Manganese	0.024	0.00029	0.0020		mg/L	1	8/26/2019 2:46:53 PM	A62442
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/26/2019 2:46:53 PM	A62442
Nickel	ND	0.0040	0.010		mg/L	1	8/26/2019 2:46:53 PM	A62442
Silver	ND	0.0014	0.0050		mg/L	1	8/26/2019 2:46:53 PM	A62442
Zinc	ND	0.0058	0.010		mg/L	1	8/26/2019 2:46:53 PM	A62442
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/26/2019 11:27:18 PM	D62426
Arsenic	0.00067	0.00010	0.0010	J	mg/L	1	8/26/2019 11:27:18 PM	D62426
Lead	ND	0.000055	0.00050		mg/L	1	8/28/2019 6:08:58 PM	B62501
Selenium	ND	0.00017	0.0010		mg/L	1	8/26/2019 11:27:18 PM	D62426
Thallium	ND	0.000048	0.00050		mg/L	1	8/28/2019 6:08:58 PM	B62501
Uranium	0.0098	0.000075	0.00050		mg/L	1	8/30/2019 2:31:11 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/26/2019 8:31:05 PM	C62426
Arsenic	0.00062	0.00031	0.0010	J	mg/L	1	8/26/2019 8:31:05 PM	C62426
Lead	ND	0.000055	0.00050		mg/L	1	8/26/2019 8:31:05 PM	C62426
Selenium	ND	0.00048	0.0010		mg/L	1	8/26/2019 8:31:05 PM	C62426
Thallium	ND	0.000052	0.00050		mg/L	1	8/26/2019 8:31:05 PM	C62426
Uranium	0.010	0.00042	0.0025		mg/L	5	8/28/2019 8:05:10 PM	C62501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000074	0.000038	0.00020	J	mg/L	1	9/5/2019 11:35:27 AM	47281
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Methyl tert-butyl ether (MTBE)	2.2	0.46	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-005
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Acetone	1.4	1.2	10	J	µg/L	1	8/22/2019 4:19:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 4:19:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 4:19:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 4:19:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 4:19:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 4:19:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-52
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-005
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 4:19:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 4:19:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	8/22/2019 4:19:00 PM	R62329
Surr: 4-Bromofluorobenzene	98.1	0	70-130		%Rec	1	8/22/2019 4:19:00 PM	R62329
Surr: Dibromofluoromethane	96.0	0	70-130		%Rec	1	8/22/2019 4:19:00 PM	R62329
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	8/22/2019 4:19:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-006
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/23/2019 2:37:53 AM	46979
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/20/2019 3:44:42 PM	46893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/20/2019 3:44:42 PM	46893
Surr: DNOP	111	0	70-130		%Rec	1	8/20/2019 3:44:42 PM	46893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 12:25:04 PM	A62420
Surr: BFB	97.2	0	65.8-143		%Rec	1	8/26/2019 12:25:04 PM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.54	0.073	0.50		mg/L	5	8/16/2019 11:20:05 PM	A62225
Chloride	26	2.5	2.5		mg/L	5	8/16/2019 11:20:05 PM	A62225
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/16/2019 11:20:05 PM	A62225
Bromide	ND	0.089	0.50		mg/L	5	8/16/2019 11:20:05 PM	A62225
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/16/2019 11:20:05 PM	A62225
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/16/2019 11:20:05 PM	A62225
Sulfate	140	0.33	2.5		mg/L	5	8/16/2019 11:20:05 PM	A62225
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.012	0.0025	0.020	J	mg/L	1	9/10/2019 2:31:26 PM	B62802
Barium	0.028	0.00065	0.0020		mg/L	1	9/10/2019 2:31:26 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 2:31:26 PM	B62802
Boron	0.37	0.0045	0.040		mg/L	1	9/10/2019 2:31:26 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 2:31:26 PM	B62802
Calcium	4.9	0.062	1.0		mg/L	1	9/10/2019 2:31:26 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 2:31:26 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 2:31:26 PM	B62802
Copper	0.0021	0.0013	0.0060	J	mg/L	1	9/10/2019 2:31:26 PM	B62802
Iron	0.049	0.0087	0.020		mg/L	1	9/10/2019 2:31:26 PM	B62802
Magnesium	0.62	0.050	1.0	J	mg/L	1	9/10/2019 2:31:26 PM	B62802
Manganese	0.024	0.00029	0.0020		mg/L	1	9/10/2019 2:31:26 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 2:31:26 PM	B62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 2:31:26 PM	B62802
Potassium	1.2	0.16	1.0		mg/L	1	9/10/2019 2:31:26 PM	B62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 2:31:26 PM	B62802
Sodium	240	2.1	5.0		mg/L	5	9/10/2019 2:39:54 PM	B62802
Zinc	0.0098	0.0023	0.010	J	mg/L	1	9/10/2019 2:31:26 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.011	0.0025	0.020	J	mg/L	1	8/26/2019 2:48:54 PM	A62442

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-006
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Barium	0.029	0.00065	0.0020		mg/L	1	8/26/2019 2:48:54 PM	A62442
Beryllium	ND	0.00028	0.0020		mg/L	1	8/26/2019 2:48:54 PM	A62442
Boron	0.35	0.0045	0.040		mg/L	1	8/26/2019 2:48:54 PM	A62442
Cadmium	ND	0.00074	0.0020		mg/L	1	8/26/2019 2:48:54 PM	A62442
Chromium	ND	0.0015	0.0060		mg/L	1	8/26/2019 2:48:54 PM	A62442
Cobalt	ND	0.0031	0.0060		mg/L	1	8/26/2019 2:48:54 PM	A62442
Copper	ND	0.0041	0.0060		mg/L	1	8/26/2019 2:48:54 PM	A62442
Iron	0.053	0.0087	0.020		mg/L	1	8/26/2019 2:48:54 PM	A62442
Manganese	0.024	0.00029	0.0020		mg/L	1	8/26/2019 2:48:54 PM	A62442
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/26/2019 2:48:54 PM	A62442
Nickel	ND	0.0040	0.010		mg/L	1	8/26/2019 2:48:54 PM	A62442
Silver	ND	0.0014	0.0050		mg/L	1	8/26/2019 2:48:54 PM	A62442
Zinc	ND	0.0058	0.010		mg/L	1	8/26/2019 2:48:54 PM	A62442
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/26/2019 11:30:00 PM	D62426
Arsenic	0.00066	0.00010	0.0010	J	mg/L	1	8/26/2019 11:30:00 PM	D62426
Lead	ND	0.000055	0.00050		mg/L	1	8/28/2019 6:11:41 PM	B62501
Selenium	ND	0.00017	0.0010		mg/L	1	8/26/2019 11:30:00 PM	D62426
Thallium	ND	0.000048	0.00050		mg/L	1	8/28/2019 6:11:41 PM	B62501
Uranium	0.0098	0.000075	0.00050		mg/L	1	8/30/2019 2:33:53 PM	A62562
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/26/2019 8:33:47 PM	C62426
Arsenic	0.00061	0.00031	0.0010	J	mg/L	1	8/26/2019 8:33:47 PM	C62426
Lead	ND	0.000055	0.00050		mg/L	1	8/26/2019 8:33:47 PM	C62426
Selenium	ND	0.00048	0.0010		mg/L	1	8/26/2019 8:33:47 PM	C62426
Thallium	ND	0.000052	0.00050		mg/L	1	8/26/2019 8:33:47 PM	C62426
Uranium	0.010	0.00042	0.0025		mg/L	5	8/28/2019 8:13:18 PM	C62501
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000044	0.000038	0.00020	J	mg/L	1	9/5/2019 11:37:40 AM	47281
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Methyl tert-butyl ether (MTBE)	2.3	0.46	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-006
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Acetone	ND	1.2	10		µg/L	1	8/22/2019 4:43:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 4:43:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 4:43:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 4:43:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 4:43:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 4:43:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/16/2019 11:10:00 AM
Lab ID: 1908952-006
Matrix: AQUEOUS
Received Date: 8/16/2019 3:00:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 4:43:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 4:43:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	99.1	0	70-130		%Rec	1	8/22/2019 4:43:00 PM	R62329
Surr: 4-Bromofluorobenzene	96.3	0	70-130		%Rec	1	8/22/2019 4:43:00 PM	R62329
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	1	8/22/2019 4:43:00 PM	R62329
Surr: Toluene-d8	97.1	0	70-130		%Rec	1	8/22/2019 4:43:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46990**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **46990**	RunNo: **62375**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2120149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0031	0.020								J
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-46990**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **46990**	RunNo: **62375**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2120151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.014	0.020	0.01000	0	140	50	150			J
Barium	0.0020	0.0020	0.002000	0	98.7	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	91.9	50	150			J
Boron	0.038	0.040	0.04000	0	94.8	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	94.5	50	150			J
Chromium	0.0056	0.0060	0.006000	0	92.9	50	150			J
Cobalt	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0061	0.0060	0.006000	0	102	50	150			
Iron	0.016	0.020	0.02000	0	80.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.0081	0.0080	0.008000	0	101	50	150			
Nickel	0.0047	0.010	0.005000	0	94.6	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.1	50	150			J
Zinc	0.015	0.010	0.01000	0	146	50	150			

Sample ID: **LCS-46990**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **46990**	RunNo: **62375**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2120153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-46990** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **46990** RunNo: **62375**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2120153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.45	0.0020	0.5000	0	90.8	85	115			
Beryllium	0.47	0.0020	0.5000	0	94.1	85	115			
Boron	0.47	0.040	0.5000	0	93.5	85	115			
Cadmium	0.47	0.0020	0.5000	0	93.2	85	115			
Chromium	0.47	0.0060	0.5000	0	93.8	85	115			
Cobalt	0.45	0.0060	0.5000	0	89.2	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Iron	0.47	0.020	0.5000	0	93.8	85	115			
Manganese	0.46	0.0020	0.5000	0	91.3	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.8	85	115			
Nickel	0.45	0.010	0.5000	0	90.9	85	115			
Silver	0.095	0.0050	0.1000	0	95.2	85	115			
Zinc	0.45	0.010	0.5000	0	90.4	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A62442** RunNo: **62442**
Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123347** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LCSLL** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **A62442** RunNo: **62442**
Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCSLL** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **A62442** RunNo: **62442**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0092	0.020	0.01000	0	91.5	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0018	0.0020	0.002000	0	90.9	50	150			J
Boron	0.038	0.040	0.04000	0	96.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Cobalt	0.0052	0.0060	0.006000	0	86.7	50	150			J
Copper	0.0056	0.0060	0.006000	0	92.6	50	150			J
Iron	0.020	0.020	0.02000	0	100	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.8	50	150			J
Molybdenum	0.0084	0.0080	0.008000	0	105	50	150			
Nickel	0.0064	0.010	0.005000	0	128	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.6	50	150			J
Zinc	0.010	0.010	0.01000	0	99.8	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A62442** RunNo: **62442**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2123349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.47	0.0020	0.5000	0	94.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.49	0.040	0.5000	0	97.8	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.7	85	115			
Copper	0.48	0.0060	0.5000	0	96.8	85	115			
Iron	0.49	0.020	0.5000	0	98.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.3	85	115			
Nickel	0.48	0.010	0.5000	0	95.5	85	115			
Silver	0.096	0.0050	0.1000	0	96.2	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139474** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139478** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0098	0.020	0.01000	0	98.3	50	150			J
Barium	0.0021	0.0020	0.002000	0	105	50	150			
Beryllium	0.0019	0.0020	0.002000	0	96.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.7	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	106	50	150			
Calcium	0.52	1.0	0.5000	0	105	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Cobalt	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0064	0.0060	0.006000	0	107	50	150			
Iron	0.020	0.020	0.02000	0	97.8	50	150			J
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Molybdenum	0.0081	0.0080	0.008000	0	102	50	150			
Nickel	0.0051	0.010	0.005000	0	102	50	150			J
Potassium	0.53	1.0	0.5000	0	106	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **A62802** RunNo: **62802**

Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139478** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0046	0.0050	0.005000	0	91.7	50	150			J
Sodium	0.50	1.0	0.5000	0	100	50	150			J
Zinc	0.011	0.010	0.01000	0	105	50	150			

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **LCSW** Batch ID: **A62802** RunNo: **62802**

Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139479** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	95.8	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.5	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.49	0.0060	0.5000	0	98.5	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.50	0.0060	0.5000	0	99.1	85	115			
Iron	0.49	0.020	0.5000	0	98.1	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.1	85	115			
Nickel	0.48	0.010	0.5000	0	96.2	85	115			
Potassium	49	1.0	50.00	0	98.6	85	115			
Silver	0.099	0.0050	0.1000	0	98.9	85	115			
Sodium	49	1.0	50.00	0	98.7	85	115			
Zinc	0.49	0.010	0.5000	0	97.8	85	115			

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **PBW** Batch ID: **B62802** RunNo: **62802**

Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-B** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **B62802** RunNo: **62802**
Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B62802** RunNo: **62802**
Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0094	0.020	0.01000	0	93.6	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.2	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	96.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.7	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	105	50	150			
Calcium	0.54	1.0	0.5000	0	107	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Cobalt	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0065	0.0060	0.006000	0	109	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.53	1.0	0.5000	0	106	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0094	0.0080	0.008000	0	117	50	150			
Nickel	0.0048	0.010	0.005000	0	96.8	50	150			J
Potassium	0.48	1.0	0.5000	0	96.4	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.6	50	150			J
Sodium	0.52	1.0	0.5000	0	105	50	150			J
Zinc	0.011	0.010	0.01000	0	106	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B62802** RunNo: **62802**
Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139482** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	107	85	115			
Barium	0.48	0.0020	0.5000	0	95.1	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.3	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.5	85	115			
Copper	0.49	0.0060	0.5000	0	97.7	85	115			
Iron	0.49	0.020	0.5000	0	98.0	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.4	85	115			
Nickel	0.48	0.010	0.5000	0	95.8	85	115			
Potassium	49	1.0	50.00	0	98.0	85	115			
Silver	0.098	0.0050	0.1000	0	98.3	85	115			
Sodium	50	1.0	50.00	0	99.4	85	115			
Zinc	0.49	0.010	0.5000	0	98.4	85	115			

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **A62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145666** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145667** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.59	1.0	0.5000	0	119	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46990** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **46990** RunNo: **62354**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2118972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **MSLLLCS-46990** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **46990** RunNo: **62354**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2118974** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00065	0.0010	0.001000	0	64.8	50	150			J
Arsenic	0.0012	0.0010	0.001000	0	116	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.5	50	150			J
Selenium	0.00081	0.0010	0.001000	0	80.6	50	150			J
Thallium	0.00042	0.00050	0.0005000	0	84.9	50	150			J

Sample ID: **MSLCS-46990** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **46990** RunNo: **62354**
Prep Date: **8/22/2019** Analysis Date: **8/22/2019** SeqNo: **2118976** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	102	85	115			
Arsenic	0.027	0.0010	0.02500	0	107	85	115			
Lead	0.012	0.00050	0.01250	0	97.6	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Thallium	0.012	0.00050	0.01250	0	96.6	85	115			

Sample ID: **MB-46990** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **46990** RunNo: **62384**
Prep Date: **8/22/2019** Analysis Date: **8/23/2019** SeqNo: **2120655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-46990** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **46990** RunNo: **62384**
Prep Date: **8/22/2019** Analysis Date: **8/23/2019** SeqNo: **2120657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MSLLLCS-46990**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **46990**	RunNo: **62384**
Prep Date: **8/22/2019**	Analysis Date: **8/23/2019**	SeqNo: **2120657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID: **MSLCS-46990**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **46990**	RunNo: **62384**
Prep Date: **8/22/2019**	Analysis Date: **8/23/2019**	SeqNo: **2120659** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **C62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122660** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **C62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00097	0.0010	0.001000	0	96.9	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00052	0.00050	0.0005000	0	104	50	150			
Selenium	0.0013	0.0010	0.001000	0	128	50	150			
Thallium	0.00047	0.00050	0.0005000	0	94.6	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **C62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.9	85	115			
Arsenic	0.026	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.027	0.0010	0.02500	0	106	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C62426**	RunNo: **62426**							
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122662**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**							
Client ID: **PBW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126594**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**							
Client ID: **BatchQC**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126595**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**							
Client ID: **LCSW**	Batch ID: **C62501**	RunNo: **62501**							
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126596**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122716** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122717** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	91.6	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	105	50	150			
Selenium	0.0012	0.0010	0.001000	0	118	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D62426**	RunNo: **62426**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.2	85	115			
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.025	0.0010	0.02500	0	98.2	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126540** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	110	50	150			
Lead	0.00052	0.00050	0.0005000	0	103	50	150			
Selenium	0.0012	0.0010	0.001000	0	125	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62501**	RunNo: **62501**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2126544** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Thallium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128563** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	99.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-47281**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **47281**	RunNo: **62666**
Prep Date: **9/4/2019**	Analysis Date: **9/5/2019**	SeqNo: **2133907** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-47281**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **47281**	RunNo: **62666**
Prep Date: **9/4/2019**	Analysis Date: **9/5/2019**	SeqNo: **2133908** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	97.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62225**	RunNo: **62225**
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62225**	RunNo: **62225**
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Bromide	2.4	0.10	2.500	0	96.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.9	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.3	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A62225**	RunNo: **62225**
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113479** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A62225**	RunNo: **62225**
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.8	0.50	5.000	0	95.3	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A62225**	RunNo: **62225**
Prep Date:	Analysis Date: **8/16/2019**	SeqNo: **2113480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.8	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			
Sulfate	9.7	0.50	10.00	0	97.1	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62484**	RunNo: **62484**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62484**	RunNo: **62484**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-46979**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **46979**	RunNo: **62366**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119534** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-46979**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **46979**	RunNo: **62366**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119536** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.099	0.010	0.1000	0	98.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-46893**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **46893**	RunNo: **62247**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115351** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	89.5	71.8	135			
Surr: DNOP	0.43		0.5000		85.2	70	130			

Sample ID: **MB-46893**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **46893**	RunNo: **62247**
Prep Date: **8/19/2019**	Analysis Date: **8/20/2019**	SeqNo: **2115352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.95		1.000		94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122301** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.3	65.8	143			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122302** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.7	73.6	119			
Surr: BFB	23		20.00		116	65.8	143			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119902** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.6	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.2	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.8	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.8	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.8	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119932** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	85.6	70	130			
Toluene	18	1.0	20.00	0	91.4	70	130			
Chlorobenzene	20	1.0	20.00	0	97.5	70	130			
1,1-Dichloroethene	15	1.0	20.00	0	76.7	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	80.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.5	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119933** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	0.21	1.0								J
1,3,5-Trimethylbenzene	0.22	1.0								J
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	0.33	2.0								J
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.96	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119933** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.8	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119933** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.0	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcs-46954**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123966** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	98	10	100.0	0	97.5	32.2	94			S
4-Chloro-3-methylphenol	180	10	200.0	0	91.7	37.7	101			
2-Chlorophenol	190	10	200.0	0	93.6	32.6	90.1			S
1,4-Dichlorobenzene	74	10	100.0	0	73.5	30	87.2			
2,4-Dinitrotoluene	82	10	100.0	0	81.7	35.9	85.8			
N-Nitrosodi-n-propylamine	93	10	100.0	0	93.2	37.1	108			
4-Nitrophenol	100	10	200.0	0	49.8	22.4	86.6			
Pentachlorophenol	150	20	200.0	0	77.3	31.6	91			
Phenol	120	10	200.0	0	61.9	21.7	84.9			
Pyrene	84	10	100.0	0	83.8	46.3	103			
1,2,4-Trichlorobenzene	77	10	100.0	0	77.4	30.2	88.3			
Surr: 2-Fluorophenol	110		200.0		56.8	15	101			
Surr: Phenol-d5	97		200.0		48.4	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		78.2	27.8	112			
Surr: Nitrobenzene-d5	87		100.0		87.2	33	113			
Surr: 2-Fluorobiphenyl	77		100.0		77.0	26.6	107			
Surr: 4-Terphenyl-d14	79		100.0		79.0	18.7	148			

Sample ID: **lcsd-46954**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123968** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	91	10	100.0	0	90.5	32.2	94	7.44	32.9	
4-Chloro-3-methylphenol	190	10	200.0	0	95.3	37.7	101	3.87	29.9	
2-Chlorophenol	160	10	200.0	0	80.6	32.6	90.1	15.0	28.5	
1,4-Dichlorobenzene	72	10	100.0	0	72.1	15	87.2	1.98	44.9	
2,4-Dinitrotoluene	82	10	100.0	0	81.7	35.9	85.8	0.0245	28.5	
N-Nitrosodi-n-propylamine	94	10	100.0	0	93.8	37.1	108	0.641	29.9	
4-Nitrophenol	20	10	200.0	0	10.0	15	86.6	133	68	RS
Pentachlorophenol	49	20	200.0	0	24.4	31.6	91	104	39.5	RS
Phenol	120	10	200.0	0	59.5	15	84.9	3.99	44.2	
Pyrene	94	10	100.0	0	93.5	46.3	103	11.0	23.8	
1,2,4-Trichlorobenzene	80	10	100.0	0	79.6	15.7	88.3	2.80	38	
Surr: 2-Fluorophenol	75		200.0		37.7	15	101	0	0	
Surr: Phenol-d5	95		200.0		47.4	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	100		200.0		52.2	27.8	112	0	0	
Surr: Nitrobenzene-d5	90		100.0		89.9	33	113	0	0	
Surr: 2-Fluorobiphenyl	75		100.0		75.1	26.6	107	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcsd-46954**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123968** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	89		100.0		89.1	18.7	148	0	0	

Sample ID: **mb-46954**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-46954** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **46954** RunNo: **62456**
Prep Date: **8/21/2019** Analysis Date: **8/27/2019** SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908952**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-46954** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **PBW** Batch ID: **46954** RunNo: **62456**

Prep Date: **8/21/2019** Analysis Date: **8/27/2019** SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	66		200.0		33.0	15	101			
Surr: Phenol-d5	50		200.0		25.2	15	84.6			
Surr: 2,4,6-Tribromophenol	83		200.0		41.4	27.8	112			
Surr: Nitrobenzene-d5	45		100.0		45.3	33	113			
Surr: 2-Fluorobiphenyl	40		100.0		40.3	26.6	107			
Surr: 4-Terphenyl-d14	50		100.0		50.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1908952** RcptNo: **1**

Received By: **Leah Baca** **8/16/2019 3:00:00 PM** Leah Baca

Completed By: **Erin Melendrez** **8/16/2019 4:09:00 PM**

Reviewed By: ENM 8/19/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)

Adjusted? NO

Checked by: DAD 8/19/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.1	Good	Not Present			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2019 ANNUAL/3Rd QTR GW SAMPLING

Project #:

OW/MW/SMW WELLS

Project Manager:

BRIAN MOORE (BMOORE1@MARATHONPETROLEUM.COM)

Sampler: CAJohnson1@marathonpetroleum.com

On Ice: ☑ Yes ☐ No

Sample Temperature: 7.4 - C 6.3 - 7.1C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1908952	8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE									Air Bubbles (Y or N)
8/16/2019	800	AQUEOUS	FIELD BLANK	3-40ML VOAS	MISC	-001	X																
8/16/2019	800	AQUEOUS	TRIP BLANK	3-40ML VOAS	MISC	-002	X																
8/15/2019	1448	AQUEOUS	BW-5B	MISC	MISC	-003	X	X	2	X	X	X											
8/16/2019	1037	AQUEOUS	OW-50	MISC	MISC	-004	X	X	[redacted]	X	X	X	X										
8/16/2019	1110	AQUEOUS	OW-52	MISC	MISC	-005	X	X	[redacted]	X	X	X	X										
8/16/2019	1110	AQUEOUS	DUPLICATE	MISC	MISC	-006	X	X	[redacted]	X	X	X	X										

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/16/19	1290			8/16/19	12 40
8/16/19	1500			8/16/19	1500

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 24, 2019

Brian Moore

Western Refining Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2019 Annual GW Sampling OrderNo.: 1908B79

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/20/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-35
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 1:48:00 PM
Lab ID: 1908B79-001 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	8/23/2019 2:53:21 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	0.72	0.35	1.0	J	mg/L	1	8/22/2019 5:04:15 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 5:04:15 PM	46957
Surr: DNOP	128	0	70-130		%Rec	1	8/22/2019 5:04:15 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.77	0.073	0.50		mg/L	5	8/21/2019 6:54:02 AM	A62287
Chloride	190	10	10		mg/L	20	8/21/2019 7:06:26 AM	A62287
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 6:54:02 AM	A62287
Bromide	0.69	0.089	0.50		mg/L	5	8/21/2019 6:54:02 AM	A62287
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/21/2019 6:54:02 AM	A62287
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 6:54:02 AM	A62287
Sulfate	79	0.33	2.5		mg/L	5	8/21/2019 6:54:02 AM	A62287
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 3:18:49 PM	B62802
Barium	0.51	0.00065	0.0020		mg/L	1	9/10/2019 3:18:49 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 3:18:49 PM	B62802
Boron	0.31	0.0045	0.040		mg/L	1	9/10/2019 3:18:49 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 3:18:49 PM	B62802
Calcium	150	0.31	5.0		mg/L	5	9/10/2019 3:20:50 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 3:18:49 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 3:18:49 PM	B62802
Copper	0.0014	0.0013	0.0060	J	mg/L	1	9/10/2019 3:18:49 PM	B62802
Iron	3.1	0.044	0.10	*	mg/L	5	9/10/2019 3:20:50 PM	B62802
Magnesium	39	0.050	1.0		mg/L	1	9/10/2019 3:18:49 PM	B62802
Manganese	2.8	0.0014	0.010	*	mg/L	5	9/10/2019 3:20:50 PM	B62802
Molybdenum	0.0080	0.0067	0.0080	J	mg/L	1	9/10/2019 3:18:49 PM	B62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 3:18:49 PM	B62802
Potassium	0.44	0.16	1.0	J	mg/L	1	9/10/2019 3:18:49 PM	B62802
Silver	0.0026	0.00094	0.0050	J	mg/L	1	9/10/2019 3:18:49 PM	B62802
Sodium	190	2.1	5.0		mg/L	5	9/10/2019 3:20:50 PM	B62802
Zinc	0.0091	0.0023	0.010	J	mg/L	1	9/10/2019 3:18:49 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	16	0.050	0.40	*	mg/L	20	8/30/2019 6:18:52 PM	47146
Barium	3.3	0.0032	0.010	*	mg/L	5	8/30/2019 6:16:57 PM	47146
Beryllium	0.00093	0.00028	0.0020	J	mg/L	1	8/30/2019 4:24:47 PM	47146
Boron	0.31	0.0045	0.040		mg/L	1	8/30/2019 4:24:47 PM	47146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-35
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 1:48:00 PM
Lab ID: 1908B79-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:24:47 PM	47146
Chromium	0.0052	0.0015	0.0060	J	mg/L	1	8/30/2019 4:24:47 PM	47146
Cobalt	0.0049	0.0031	0.0060	J	mg/L	1	8/30/2019 4:24:47 PM	47146
Copper	0.0072	0.0041	0.0060		mg/L	1	8/30/2019 4:24:47 PM	47146
Iron	9.8	0.17	0.40	*	mg/L	20	9/4/2019 6:48:26 PM	47146
Manganese	4.0	0.0014	0.010	*	mg/L	5	8/30/2019 6:16:57 PM	47146
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:24:47 PM	47146
Nickel	0.011	0.0040	0.010		mg/L	1	8/30/2019 4:24:47 PM	47146
Silver	0.0027	0.0014	0.0050	J	mg/L	1	8/30/2019 4:24:47 PM	47146
Zinc	0.025	0.0058	0.010		mg/L	1	8/30/2019 4:24:47 PM	47146
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00045	0.00039	0.0010	J	mg/L	1	9/4/2019 2:02:22 PM	A62654
Arsenic	0.0014	0.00010	0.0010		mg/L	1	9/4/2019 2:02:22 PM	A62654
Lead	0.000089	0.000055	0.00050	J	mg/L	1	9/4/2019 2:02:22 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:02:22 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:02:22 PM	A62654
Uranium	0.0074	0.000075	0.00050		mg/L	1	9/4/2019 2:02:22 PM	A62654
EPA 200.8: METALS							Analyst: **JLF**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/3/2019 5:00:36 PM	47146
Arsenic	0.0040	0.00031	0.0010		mg/L	1	8/29/2019 5:54:41 PM	47146
Lead	0.011	0.000055	0.00050		mg/L	1	8/29/2019 5:54:41 PM	47146
Selenium	0.0017	0.00048	0.0010		mg/L	1	8/29/2019 5:54:41 PM	47146
Thallium	0.00015	0.000052	0.00050	J	mg/L	1	8/29/2019 5:54:41 PM	47146
Uranium	0.0089	0.000085	0.00050		mg/L	1	8/29/2019 5:54:41 PM	47146
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000042	0.000038	0.00020	J	mg/L	1	9/6/2019 3:56:59 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 1:01:03 PM	46954

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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Hall Environmental Analysis Laboratory, Inc.

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Collection Date: 8/19/2019 1:48:00 PM
Lab ID: 1908B79-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 1:01:03 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 1:01:03 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 1:01:03 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 1:01:03 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 1:01:03 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 1:01:03 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 1:01:03 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 1:01:03 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 1:01:03 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 1:01:03 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-35
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 1:48:00 PM
Lab ID: 1908B79-001 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 1:01:03 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 1:01:03 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 1:01:03 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Naphthalene	ND	4.1	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 1:01:03 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 1:01:03 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 1:01:03 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 1:01:03 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 1:01:03 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 1:01:03 PM	46954
Surr: 2-Fluorophenol	16.3	0	15-101		%Rec	1	8/27/2019 1:01:03 PM	46954
Surr: Phenol-d5	8.75	0	15-84.6	S	%Rec	1	8/27/2019 1:01:03 PM	46954
Surr: 2,4,6-Tribromophenol	55.9	0	27.8-112		%Rec	1	8/27/2019 1:01:03 PM	46954
Surr: Nitrobenzene-d5	67.8	0	33-113		%Rec	1	8/27/2019 1:01:03 PM	46954
Surr: 2-Fluorobiphenyl	61.5	0	26.6-107		%Rec	1	8/27/2019 1:01:03 PM	46954
Surr: 4-Terphenyl-d14	75.7	0	18.7-148		%Rec	1	8/27/2019 1:01:03 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	22	0.17	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Ethylbenzene	3.0	0.13	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Methyl tert-butyl ether (MTBE)	26	0.46	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2,4-Trimethylbenzene	0.31	0.21	1.0	J	µg/L	1	8/22/2019 5:07:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 5:07:00 PM	R62329

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-35
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 1:48:00 PM
Lab ID: 1908B79-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Acetone	5.4	1.2	10	J	µg/L	1	8/22/2019 5:07:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 5:07:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 5:07:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Chlorobenzene	0.66	0.19	1.0	J	µg/L	1	8/22/2019 5:07:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,4-Dichlorobenzene	5.9	0.29	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 5:07:00 PM	R62329
Isopropylbenzene	0.81	0.19	1.0	J	µg/L	1	8/22/2019 5:07:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 5:07:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
n-Propylbenzene	0.81	0.21	1.0	J	µg/L	1	8/22/2019 5:07:00 PM	R62329
sec-Butylbenzene	1.4	0.25	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-35
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 1:48:00 PM
Lab ID: 1908B79-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
tert-Butylbenzene	0.30	0.21	1.0	J	µg/L	1	8/22/2019 5:07:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 5:07:00 PM	R62329
Xylenes, Total	0.66	0.45	1.5	J	µg/L	1	8/22/2019 5:07:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	96.4	0	70-130		%Rec	1	8/22/2019 5:07:00 PM	R62329
Surr: 4-Bromofluorobenzene	98.3	0	70-130		%Rec	1	8/22/2019 5:07:00 PM	R62329
Surr: Dibromofluoromethane	94.2	0	70-130		%Rec	1	8/22/2019 5:07:00 PM	R62329
Surr: Toluene-d8	97.7	0	70-130		%Rec	1	8/22/2019 5:07:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	0.56	0.031	0.050		mg/L	1	8/23/2019 10:43:35 PM	G62400
Surr: BFB	98.3	0	70-130		%Rec	1	8/23/2019 10:43:35 PM	G62400

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-34
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 11:11:00 AM
Lab ID: 1908B79-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	8/23/2019 8:46:20 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/22/2019 6:11:43 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 6:11:43 PM	46957
Surr: DNOP	127	0	70-130		%Rec	1	8/22/2019 6:11:43 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.25	0.073	0.50	J	mg/L	5	8/21/2019 7:18:50 AM	A62287
Chloride	740	25	25		mg/L	50	9/4/2019 10:45:28 PM	R62640
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 7:18:50 AM	A62287
Bromide	0.56	0.089	0.50		mg/L	5	8/21/2019 7:18:50 AM	A62287
Nitrogen, Nitrate (As N)	9.7	0.025	0.50		mg/L	5	8/21/2019 7:18:50 AM	A62287
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 7:18:50 AM	A62287
Sulfate	110	0.33	2.5		mg/L	5	8/21/2019 7:18:50 AM	A62287
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 3:22:58 PM	B62802
Barium	0.14	0.00065	0.0020		mg/L	1	9/10/2019 3:22:58 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 3:22:58 PM	B62802
Boron	0.41	0.0045	0.040		mg/L	1	9/10/2019 3:22:58 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 3:22:58 PM	B62802
Calcium	120	0.31	5.0		mg/L	5	9/10/2019 3:25:13 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 3:22:58 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 3:22:58 PM	B62802
Copper	0.0026	0.0013	0.0060	J	mg/L	1	9/10/2019 3:22:58 PM	B62802
Iron	ND	0.0087	0.020		mg/L	1	9/10/2019 3:22:58 PM	B62802
Magnesium	28	0.050	1.0		mg/L	1	9/10/2019 3:22:58 PM	B62802
Manganese	ND	0.00029	0.0020		mg/L	1	9/10/2019 3:22:58 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 3:22:58 PM	B62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 3:22:58 PM	B62802
Potassium	1.3	0.16	1.0		mg/L	1	9/10/2019 3:22:58 PM	B62802
Silver	0.0030	0.00094	0.0050	J	mg/L	1	9/10/2019 3:22:58 PM	B62802
Sodium	450	2.1	5.0		mg/L	5	9/10/2019 3:25:13 PM	B62802
Zinc	0.0085	0.0023	0.010	J	mg/L	1	9/10/2019 3:22:58 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	4.1	0.012	0.10	*	mg/L	5	9/4/2019 6:50:29 PM	47146
Barium	0.19	0.00065	0.0020		mg/L	1	8/30/2019 4:26:53 PM	47146
Beryllium	0.00031	0.00028	0.0020	J	mg/L	1	8/30/2019 4:26:53 PM	47146
Boron	0.43	0.0045	0.040		mg/L	1	8/30/2019 4:26:53 PM	47146

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-34
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 11:11:00 AM
Lab ID: 1908B79-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:26:53 PM	47146
Chromium	ND	0.0015	0.0060		mg/L	1	8/30/2019 4:26:53 PM	47146
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 4:26:53 PM	47146
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 4:26:53 PM	47146
Iron	2.0	0.044	0.10	*	mg/L	5	9/4/2019 6:50:29 PM	47146
Manganese	0.045	0.00029	0.0020		mg/L	1	8/30/2019 4:26:53 PM	47146
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:26:53 PM	47146
Nickel	ND	0.0040	0.010		mg/L	1	8/30/2019 4:26:53 PM	47146
Silver	0.0019	0.0014	0.0050	J	mg/L	1	8/30/2019 4:26:53 PM	47146
Zinc	0.017	0.0058	0.010		mg/L	1	8/30/2019 4:26:53 PM	47146
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00090	0.00039	0.0010	J	mg/L	1	9/4/2019 2:07:45 PM	A62654
Arsenic	0.00044	0.00010	0.0010	J	mg/L	1	9/4/2019 2:07:45 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:07:45 PM	A62654
Selenium	0.0014	0.00017	0.0010		mg/L	1	9/4/2019 2:07:45 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:07:45 PM	A62654
Uranium	0.019	0.000075	0.00050		mg/L	1	9/4/2019 2:07:45 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/29/2019 6:01:16 PM	47146
Arsenic	0.00095	0.00031	0.0010	J	mg/L	1	8/29/2019 6:01:16 PM	47146
Lead	0.0014	0.000055	0.00050		mg/L	1	8/29/2019 6:01:16 PM	47146
Selenium	0.0014	0.00048	0.0010		mg/L	1	8/29/2019 6:01:16 PM	47146
Thallium	0.000089	0.000052	0.00050	J	mg/L	1	8/29/2019 6:01:16 PM	47146
Uranium	0.020	0.000085	0.00050		mg/L	1	8/29/2019 6:01:16 PM	47146
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000099	0.000038	0.00020	J	mg/L	1	9/6/2019 3:59:14 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 1:30:40 PM	46954

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-34
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 11:11:00 AM
Lab ID: 1908B79-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 1:30:40 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 1:30:40 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 1:30:40 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 1:30:40 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 1:30:40 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 1:30:40 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 1:30:40 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 1:30:40 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 1:30:40 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 1:30:40 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-34
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 11:11:00 AM
Lab ID: 1908B79-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 1:30:40 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 1:30:40 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 1:30:40 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Naphthalene	ND	4.1	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 1:30:40 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 1:30:40 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 1:30:40 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 1:30:40 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 1:30:40 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 1:30:40 PM	46954
Surr: 2-Fluorophenol	51.0	0	15-101		%Rec	1	8/27/2019 1:30:40 PM	46954
Surr: Phenol-d5	41.6	0	15-84.6		%Rec	1	8/27/2019 1:30:40 PM	46954
Surr: 2,4,6-Tribromophenol	57.4	0	27.8-112		%Rec	1	8/27/2019 1:30:40 PM	46954
Surr: Nitrobenzene-d5	76.2	0	33-113		%Rec	1	8/27/2019 1:30:40 PM	46954
Surr: 2-Fluorobiphenyl	66.1	0	26.6-107		%Rec	1	8/27/2019 1:30:40 PM	46954
Surr: 4-Terphenyl-d14	69.8	0	18.7-148		%Rec	1	8/27/2019 1:30:40 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 5:31:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-34
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 11:11:00 AM
Lab ID: 1908B79-002 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Acetone	ND	1.2	10		µg/L	1	8/22/2019 5:31:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 5:31:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 5:31:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,1-Dichloroethene	0.43	0.21	1.0	J	µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 5:31:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 5:31:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-34
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 11:11:00 AM
Lab ID: 1908B79-002 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Trichloroethene (TCE)	0.89	0.17	1.0	J	µg/L	1	8/22/2019 5:31:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 5:31:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 5:31:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	99.6	0	70-130		%Rec	1	8/22/2019 5:31:00 PM	R62329
Surr: 4-Bromofluorobenzene	97.4	0	70-130		%Rec	1	8/22/2019 5:31:00 PM	R62329
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	8/22/2019 5:31:00 PM	R62329
Surr: Toluene-d8	98.3	0	70-130		%Rec	1	8/22/2019 5:31:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	8/23/2019 11:12:21 PM	G62400
Surr: BFB	96.1	0	70-130		%Rec	1	8/23/2019 11:12:21 PM	G62400

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-19
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 3:35:00 PM
Lab ID: 1908B79-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	8/23/2019 9:01:28 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	13	0.35	1.0		mg/L	1	8/22/2019 6:34:11 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 6:34:11 PM	46957
Surr: DNOP	129	0	70-130		%Rec	1	8/22/2019 6:34:11 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.073	0.50		mg/L	5	8/21/2019 7:43:39 AM	A62287
Chloride	140	10	10		mg/L	20	8/21/2019 7:56:04 AM	A62287
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 7:43:39 AM	A62287
Bromide	1.5	0.089	0.50		mg/L	5	8/21/2019 7:43:39 AM	A62287
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/21/2019 7:43:39 AM	A62287
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 7:43:39 AM	A62287
Sulfate	ND	0.33	2.5		mg/L	5	8/21/2019 7:43:39 AM	A62287
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.043	0.0025	0.020		mg/L	1	9/10/2019 3:33:42 PM	B62802
Barium	1.8	0.0032	0.010		mg/L	5	9/10/2019 3:35:44 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 3:33:42 PM	B62802
Boron	0.31	0.0045	0.040		mg/L	1	9/10/2019 3:33:42 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 3:33:42 PM	B62802
Calcium	140	0.31	5.0		mg/L	5	9/10/2019 3:35:44 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 3:33:42 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 3:33:42 PM	B62802
Copper	ND	0.0013	0.0060		mg/L	1	9/10/2019 3:33:42 PM	B62802
Iron	11	0.17	0.40	*	mg/L	20	9/14/2019 10:11:50 AM	A62943
Magnesium	29	0.050	1.0		mg/L	1	9/10/2019 3:33:42 PM	B62802
Manganese	2.3	0.0014	0.010	*	mg/L	5	9/10/2019 3:35:44 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 3:33:42 PM	B62802
Nickel	0.0046	0.0040	0.010	J	mg/L	1	9/10/2019 3:33:42 PM	B62802
Potassium	0.71	0.16	1.0	J	mg/L	1	9/10/2019 3:33:42 PM	B62802
Silver	0.0015	0.00094	0.0050	J	mg/L	1	9/10/2019 3:33:42 PM	B62802
Sodium	300	2.1	5.0		mg/L	5	9/10/2019 3:35:44 PM	B62802
Zinc	0.0084	0.0023	0.010	J	mg/L	1	9/10/2019 3:33:42 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	23	0.12	1.0	*	mg/L	50	8/30/2019 6:29:05 PM	47146
Barium	2.3	0.0032	0.010	*	mg/L	5	8/30/2019 6:27:15 PM	47146
Beryllium	0.0020	0.00028	0.0020		mg/L	1	8/30/2019 4:37:17 PM	47146
Boron	0.32	0.0045	0.040		mg/L	1	8/30/2019 4:37:17 PM	47146

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ND	Not Detected at the Reporting Limit
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-19
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 3:35:00 PM
Lab ID: 1908B79-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:37:17 PM	47146
Chromium	0.0070	0.0015	0.0060		mg/L	1	8/30/2019 4:37:17 PM	47146
Cobalt	0.0033	0.0031	0.0060	J	mg/L	1	8/30/2019 4:37:17 PM	47146
Copper	0.0070	0.0041	0.0060		mg/L	1	8/30/2019 4:37:17 PM	47146
Iron	19	0.44	1.0	*	mg/L	50	9/4/2019 6:58:47 PM	47146
Manganese	2.7	0.0014	0.010	*	mg/L	5	8/30/2019 6:27:15 PM	47146
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:37:17 PM	47146
Nickel	0.014	0.0040	0.010		mg/L	1	8/30/2019 4:37:17 PM	47146
Silver	0.0017	0.0014	0.0050	J	mg/L	1	8/30/2019 4:37:17 PM	47146
Zinc	0.035	0.0058	0.010		mg/L	1	8/30/2019 4:37:17 PM	47146
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.0011	0.00039	0.0010		mg/L	1	9/4/2019 2:15:55 PM	A62654
Arsenic	0.013	0.00010	0.0010	*	mg/L	1	9/4/2019 2:15:55 PM	A62654
Lead	0.0020	0.000055	0.00050		mg/L	1	9/4/2019 2:15:55 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:15:55 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:15:55 PM	A62654
Uranium	0.00019	0.000075	0.00050	J	mg/L	1	9/4/2019 2:15:55 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/29/2019 6:03:27 PM	47146
Arsenic	0.014	0.00031	0.0010	*	mg/L	1	8/29/2019 6:03:27 PM	47146
Lead	0.022	0.000055	0.00050	*	mg/L	1	8/29/2019 6:03:27 PM	47146
Selenium	0.0014	0.00048	0.0010		mg/L	1	8/29/2019 6:03:27 PM	47146
Thallium	0.00013	0.000052	0.00050	J	mg/L	1	8/29/2019 6:03:27 PM	47146
Uranium	0.0028	0.000085	0.00050		mg/L	1	8/29/2019 6:03:27 PM	47146
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:01:29 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.3	3.0	10	J	µg/L	1	8/27/2019 2:00:25 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 2:00:25 PM	46954

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Hall Environmental Analysis Laboratory, Inc.

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Collection Date: 8/19/2019 3:35:00 PM
Lab ID: 1908B79-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 2:00:25 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 2:00:25 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Carbazole	11	2.9	10		µg/L	1	8/27/2019 2:00:25 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 2:00:25 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 2:00:25 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 2:00:25 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 2:00:25 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 2:00:25 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 2:00:25 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 2:00:25 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Fluorene	7.1	2.9	10	J	µg/L	1	8/27/2019 2:00:25 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954

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CLIENT: Western Refining Gallup
Client Sample ID: MKTF-19
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 3:35:00 PM
Lab ID: 1908B79-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	160	3.1	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2-Methylnaphthalene	320	30	100		µg/L	10	8/28/2019 4:33:33 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 2:00:25 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 2:00:25 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 2:00:25 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Naphthalene	450	41	100		µg/L	10	8/28/2019 4:33:33 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 2:00:25 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 2:00:25 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 2:00:25 PM	46954
Phenanthrene	5.9	2.8	10	J	µg/L	1	8/27/2019 2:00:25 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 2:00:25 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 2:00:25 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 2:00:25 PM	46954
Surr: 2-Fluorophenol	48.8	0	15-101		%Rec	1	8/27/2019 2:00:25 PM	46954
Surr: Phenol-d5	32.6	0	15-84.6		%Rec	1	8/27/2019 2:00:25 PM	46954
Surr: 2,4,6-Tribromophenol	64.9	0	27.8-112		%Rec	1	8/27/2019 2:00:25 PM	46954
Surr: Nitrobenzene-d5	76.8	0	33-113		%Rec	1	8/27/2019 2:00:25 PM	46954
Surr: 2-Fluorobiphenyl	72.5	0	26.6-107		%Rec	1	8/27/2019 2:00:25 PM	46954
Surr: 4-Terphenyl-d14	69.8	0	18.7-148		%Rec	1	8/27/2019 2:00:25 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	1400	3.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Toluene	ND	7.0	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Ethylbenzene	720	2.6	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Methyl tert-butyl ether (MTBE)	8300	91	200		µg/L	200	8/22/2019 5:55:00 PM	R62329
1,2,4-Trimethylbenzene	690	4.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,3,5-Trimethylbenzene	120	3.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Naphthalene	500	5.5	40		µg/L	20	8/22/2019 6:19:00 PM	R62329
1-Methylnaphthalene	230	6.3	80		µg/L	20	8/22/2019 6:19:00 PM	R62329

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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	310	6.9	80		µg/L	20	8/22/2019 6:19:00 PM	R62329
Acetone	ND	24	200		µg/L	20	8/22/2019 6:19:00 PM	R62329
Bromobenzene	ND	4.9	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Bromodichloromethane	ND	2.7	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Bromoform	ND	5.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Bromomethane	ND	5.5	60		µg/L	20	8/22/2019 6:19:00 PM	R62329
2-Butanone	ND	42	200		µg/L	20	8/22/2019 6:19:00 PM	R62329
Carbon disulfide	ND	9.1	200		µg/L	20	8/22/2019 6:19:00 PM	R62329
Carbon Tetrachloride	ND	2.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Chlorobenzene	ND	3.9	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Chloroethane	ND	3.6	40		µg/L	20	8/22/2019 6:19:00 PM	R62329
Chloroform	ND	2.4	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Chloromethane	ND	6.4	60		µg/L	20	8/22/2019 6:19:00 PM	R62329
2-Chlorotoluene	ND	4.9	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
4-Chlorotoluene	ND	4.7	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
cis-1,2-DCE	ND	3.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	8/22/2019 6:19:00 PM	R62329
Dibromochloromethane	ND	4.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Dibromomethane	ND	4.2	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,1-Dichloroethane	ND	2.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,1-Dichloroethene	ND	4.1	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2-Dichloropropane	ND	4.2	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,3-Dichloropropane	ND	4.0	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
2,2-Dichloropropane	ND	4.7	40		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,1-Dichloropropene	ND	3.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Hexachlorobutadiene	ND	6.2	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
2-Hexanone	ND	31	200		µg/L	20	8/22/2019 6:19:00 PM	R62329
Isopropylbenzene	37	3.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
4-Isopropyltoluene	10	4.3	20	J	µg/L	20	8/22/2019 6:19:00 PM	R62329
4-Methyl-2-pentanone	ND	14	200		µg/L	20	8/22/2019 6:19:00 PM	R62329
Methylene Chloride	ND	3.1	60		µg/L	20	8/22/2019 6:19:00 PM	R62329
n-Butylbenzene	35	4.6	60	J	µg/L	20	8/22/2019 6:19:00 PM	R62329
n-Propylbenzene	110	4.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
sec-Butylbenzene	11	5.0	20	J	µg/L	20	8/22/2019 6:19:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MKTF-19
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 3:35:00 PM
Lab ID: 1908B79-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	3.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
tert-Butylbenzene	ND	4.1	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	8/22/2019 6:19:00 PM	R62329
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
trans-1,2-DCE	ND	3.6	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Trichlorofluoromethane	ND	3.8	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	8/22/2019 6:19:00 PM	R62329
Vinyl chloride	ND	3.6	20		µg/L	20	8/22/2019 6:19:00 PM	R62329
Xylenes, Total	690	9.1	30		µg/L	20	8/22/2019 6:19:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	94.2	0	70-130		%Rec	20	8/22/2019 6:19:00 PM	R62329
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	20	8/22/2019 6:19:00 PM	R62329
Surr: Dibromofluoromethane	92.2	0	70-130		%Rec	20	8/22/2019 6:19:00 PM	R62329
Surr: Toluene-d8	98.7	0	70-130		%Rec	20	8/22/2019 6:19:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	18	1.5	2.5		mg/L	50	8/23/2019 11:41:13 PM	G62400
Surr: BFB	97.2	0	70-130		%Rec	50	8/23/2019 11:41:13 PM	G62400

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: DUP-20190819-1
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019
Lab ID: 1908B79-004
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/23/2019 9:16:43 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	11	0.35	1.0		mg/L	1	8/22/2019 6:56:41 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 6:56:41 PM	46957
Surr: DNOP	130	0	70-130		%Rec	1	8/22/2019 6:56:41 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.073	0.50		mg/L	5	8/21/2019 8:08:29 AM	A62287
Chloride	140	10	10		mg/L	20	8/21/2019 8:20:54 AM	A62287
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 8:08:29 AM	A62287
Bromide	1.5	0.089	0.50		mg/L	5	8/21/2019 8:08:29 AM	A62287
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/21/2019 8:08:29 AM	A62287
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 8:08:29 AM	A62287
Sulfate	ND	0.33	2.5		mg/L	5	8/21/2019 8:08:29 AM	A62287
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 3:37:52 PM	B62802
Barium	1.8	0.0032	0.010		mg/L	5	9/10/2019 3:39:51 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 3:37:52 PM	B62802
Boron	0.31	0.0045	0.040		mg/L	1	9/10/2019 3:37:52 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 3:37:52 PM	B62802
Calcium	140	0.31	5.0		mg/L	5	9/10/2019 3:39:51 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 3:37:52 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 3:37:52 PM	B62802
Copper	0.0013	0.0013	0.0060	J	mg/L	1	9/10/2019 3:37:52 PM	B62802
Iron	11	0.17	0.40	*	mg/L	20	9/14/2019 10:13:59 AM	A62943
Magnesium	29	0.050	1.0		mg/L	1	9/10/2019 3:37:52 PM	B62802
Manganese	2.3	0.0014	0.010	*	mg/L	5	9/10/2019 3:39:51 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 3:37:52 PM	B62802
Nickel	0.0047	0.0040	0.010	J	mg/L	1	9/10/2019 3:37:52 PM	B62802
Potassium	0.68	0.16	1.0	J	mg/L	1	9/10/2019 3:37:52 PM	B62802
Silver	0.0016	0.00094	0.0050	J	mg/L	1	9/10/2019 3:37:52 PM	B62802
Sodium	300	2.1	5.0		mg/L	5	9/10/2019 3:39:51 PM	B62802
Zinc	0.0037	0.0023	0.010	J	mg/L	1	9/10/2019 3:37:52 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	27	0.12	1.0	*	mg/L	50	8/30/2019 6:41:15 PM	47146
Barium	2.3	0.0032	0.010	*	mg/L	5	8/30/2019 6:31:18 PM	47146
Beryllium	0.0024	0.00028	0.0020		mg/L	1	8/30/2019 4:39:23 PM	47146
Boron	0.32	0.0045	0.040		mg/L	1	8/30/2019 4:39:23 PM	47146

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ND	Not Detected at the Reporting Limit
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: DUP-20190819-1
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019
Lab ID: 1908B79-004
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:39:23 PM	47146
Chromium	0.0090	0.0015	0.0060		mg/L	1	8/30/2019 4:39:23 PM	47146
Cobalt	0.0054	0.0031	0.0060	J	mg/L	1	8/30/2019 4:39:23 PM	47146
Copper	0.0099	0.0041	0.0060		mg/L	1	8/30/2019 4:39:23 PM	47146
Iron	21	0.44	1.0	*	mg/L	50	9/4/2019 7:00:48 PM	47146
Manganese	2.8	0.0014	0.010	*	mg/L	5	8/30/2019 6:31:18 PM	47146
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:39:23 PM	47146
Nickel	0.017	0.0040	0.010		mg/L	1	8/30/2019 4:39:23 PM	47146
Silver	ND	0.0014	0.0050		mg/L	1	8/30/2019 4:39:23 PM	47146
Zinc	0.038	0.0058	0.010		mg/L	1	8/30/2019 4:39:23 PM	47146
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.0010	0.00039	0.0010		mg/L	1	9/4/2019 2:18:37 PM	A62654
Arsenic	0.013	0.00010	0.0010	*	mg/L	1	9/4/2019 2:18:37 PM	A62654
Lead	0.0018	0.000055	0.00050		mg/L	1	9/4/2019 2:18:37 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:18:37 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:18:37 PM	A62654
Uranium	0.00016	0.000075	0.00050	J	mg/L	1	9/4/2019 2:18:37 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/29/2019 6:05:39 PM	47146
Arsenic	0.015	0.00031	0.0010	*	mg/L	1	8/29/2019 6:05:39 PM	47146
Lead	0.028	0.00027	0.0025	*	mg/L	5	8/29/2019 6:20:59 PM	47146
Selenium	0.0023	0.00048	0.0010		mg/L	1	8/29/2019 6:05:39 PM	47146
Thallium	0.00013	0.000052	0.00050	J	mg/L	1	8/29/2019 6:05:39 PM	47146
Uranium	0.0034	0.000085	0.00050		mg/L	1	8/29/2019 6:05:39 PM	47146
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:03:45 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.5	3.0	10	J	µg/L	1	8/27/2019 2:30:10 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 2:30:10 PM	46954

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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: DUP-20190819-1
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019
Lab ID: 1908B79-004
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 2:30:10 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 2:30:10 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Carbazole	12	2.9	10		µg/L	1	8/27/2019 2:30:10 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 2:30:10 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 2:30:10 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 2:30:10 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 2:30:10 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 2:30:10 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 2:30:10 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Diethyl phthalate	5.7	2.9	10	J	µg/L	1	8/27/2019 2:30:10 PM	46954
Dimethyl phthalate	3.5	3.2	10	J	µg/L	1	8/27/2019 2:30:10 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 2:30:10 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 2:30:10 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 2:30:10 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 2:30:10 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Fluorene	7.3	2.9	10	J	µg/L	1	8/27/2019 2:30:10 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: DUP-20190819-1
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019
Lab ID: 1908B79-004
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	160	3.1	10		µg/L	1	8/27/2019 2:30:10 PM	46954
2-Methylnaphthalene	310	30	100		µg/L	10	8/28/2019 5:03:25 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 2:30:10 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 2:30:10 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 2:30:10 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Naphthalene	440	41	100		µg/L	10	8/28/2019 5:03:25 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 2:30:10 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 2:30:10 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 2:30:10 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 2:30:10 PM	46954
Phenanthrene	6.6	2.8	10	J	µg/L	1	8/27/2019 2:30:10 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 2:30:10 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 2:30:10 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 2:30:10 PM	46954
Surr: 2-Fluorophenol	21.9	0	15-101		%Rec	1	8/27/2019 2:30:10 PM	46954
Surr: Phenol-d5	8.26	0	15-84.6	S	%Rec	1	8/27/2019 2:30:10 PM	46954
Surr: 2,4,6-Tribromophenol	65.0	0	27.8-112		%Rec	1	8/27/2019 2:30:10 PM	46954
Surr: Nitrobenzene-d5	76.9	0	33-113		%Rec	1	8/27/2019 2:30:10 PM	46954
Surr: 2-Fluorobiphenyl	64.2	0	26.6-107		%Rec	1	8/27/2019 2:30:10 PM	46954
Surr: 4-Terphenyl-d14	81.4	0	18.7-148		%Rec	1	8/27/2019 2:30:10 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	1400	3.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Toluene	ND	7.0	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Ethylbenzene	720	2.6	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Methyl tert-butyl ether (MTBE)	8100	91	200		µg/L	200	8/22/2019 6:44:00 PM	R62329
1,2,4-Trimethylbenzene	680	4.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,3,5-Trimethylbenzene	120	3.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Naphthalene	490	5.5	40		µg/L	20	8/22/2019 7:08:00 PM	R62329
1-Methylnaphthalene	220	6.3	80		µg/L	20	8/22/2019 7:08:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: DUP-20190819-1
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019
Lab ID: 1908B79-004
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	290	6.9	80		µg/L	20	8/22/2019 7:08:00 PM	R62329
Acetone	ND	24	200		µg/L	20	8/22/2019 7:08:00 PM	R62329
Bromobenzene	ND	4.9	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Bromodichloromethane	ND	2.7	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Bromoform	ND	5.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Bromomethane	ND	5.5	60		µg/L	20	8/22/2019 7:08:00 PM	R62329
2-Butanone	ND	42	200		µg/L	20	8/22/2019 7:08:00 PM	R62329
Carbon disulfide	ND	9.1	200		µg/L	20	8/22/2019 7:08:00 PM	R62329
Carbon Tetrachloride	ND	2.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Chlorobenzene	ND	3.9	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Chloroethane	ND	3.6	40		µg/L	20	8/22/2019 7:08:00 PM	R62329
Chloroform	ND	2.4	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Chloromethane	ND	6.4	60		µg/L	20	8/22/2019 7:08:00 PM	R62329
2-Chlorotoluene	ND	4.9	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
4-Chlorotoluene	ND	4.7	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
cis-1,2-DCE	ND	3.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	8/22/2019 7:08:00 PM	R62329
Dibromochloromethane	ND	4.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Dibromomethane	ND	4.2	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,1-Dichloroethane	ND	2.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,1-Dichloroethene	ND	4.1	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2-Dichloropropane	ND	4.2	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,3-Dichloropropane	ND	4.0	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
2,2-Dichloropropane	ND	4.7	40		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,1-Dichloropropene	ND	3.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Hexachlorobutadiene	ND	6.2	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
2-Hexanone	ND	31	200		µg/L	20	8/22/2019 7:08:00 PM	R62329
Isopropylbenzene	37	3.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
4-Isopropyltoluene	10	4.3	20	J	µg/L	20	8/22/2019 7:08:00 PM	R62329
4-Methyl-2-pentanone	ND	14	200		µg/L	20	8/22/2019 7:08:00 PM	R62329
Methylene Chloride	ND	3.1	60		µg/L	20	8/22/2019 7:08:00 PM	R62329
n-Butylbenzene	33	4.6	60	J	µg/L	20	8/22/2019 7:08:00 PM	R62329
n-Propylbenzene	100	4.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
sec-Butylbenzene	11	5.0	20	J	µg/L	20	8/22/2019 7:08:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: DUP-20190819-1
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019
Lab ID: 1908B79-004
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	3.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
tert-Butylbenzene	ND	4.1	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	8/22/2019 7:08:00 PM	R62329
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
trans-1,2-DCE	ND	3.6	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Trichlorofluoromethane	ND	3.8	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	8/22/2019 7:08:00 PM	R62329
Vinyl chloride	ND	3.6	20		µg/L	20	8/22/2019 7:08:00 PM	R62329
Xylenes, Total	710	9.1	30		µg/L	20	8/22/2019 7:08:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	96.5	0	70-130		%Rec	20	8/22/2019 7:08:00 PM	R62329
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	20	8/22/2019 7:08:00 PM	R62329
Surr: Dibromofluoromethane	94.7	0	70-130		%Rec	20	8/22/2019 7:08:00 PM	R62329
Surr: Toluene-d8	99.4	0	70-130		%Rec	20	8/22/2019 7:08:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	19	0.61	1.0		mg/L	20	8/24/2019 12:10:04 AM	G62400
Surr: BFB	99.1	0	70-130		%Rec	20	8/24/2019 12:10:04 AM	G62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: TB
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 12:16:00 PM
Lab ID: 1908B79-005
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Toluene	0.53	0.35	1.0	J	µg/L	1	8/22/2019 7:32:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Naphthalene	0.58	0.28	2.0	J	µg/L	1	8/22/2019 7:32:00 PM	R62329
1-Methylnaphthalene	0.90	0.31	4.0	J	µg/L	1	8/22/2019 7:32:00 PM	R62329
2-Methylnaphthalene	1.2	0.35	4.0	J	µg/L	1	8/22/2019 7:32:00 PM	R62329
Acetone	ND	1.2	10		µg/L	1	8/22/2019 7:32:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 7:32:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 7:32:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Chlorobenzene	0.62	0.19	1.0	J	µg/L	1	8/22/2019 7:32:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 7:32:00 PM	R62329

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: TB
Project: 2019 Annual GW Sampling
Collection Date: 8/19/2019 12:16:00 PM
Lab ID: 1908B79-005
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 7:32:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 7:32:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 7:32:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 7:32:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	98.6	0	70-130		%Rec	1	8/22/2019 7:32:00 PM	R62329
Surr: 4-Bromofluorobenzene	95.5	0	70-130		%Rec	1	8/22/2019 7:32:00 PM	R62329
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	1	8/22/2019 7:32:00 PM	R62329
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	8/22/2019 7:32:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	8/24/2019 2:34:27 AM	G62400
Surr: BFB	100	0	70-130		%Rec	1	8/24/2019 2:34:27 AM	G62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-22
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 9:00:00 AM
Lab ID: 1908B79-006
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	8/23/2019 9:31:52 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	2.4	0.35	1.0		mg/L	1	8/26/2019 6:24:33 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 6:24:33 PM	47020
Surr: DNOP	120	0	70-130		%Rec	1	8/26/2019 6:24:33 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.40	0.073	0.50	J	mg/L	5	8/21/2019 11:05:55 AM	R62337
Chloride	200	10	10		mg/L	20	8/21/2019 11:18:48 AM	R62337
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 11:05:55 AM	R62337
Bromide	1.2	0.089	0.50		mg/L	5	8/21/2019 11:05:55 AM	R62337
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/21/2019 11:05:55 AM	R62337
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 11:05:55 AM	R62337
Sulfate	4.7	0.33	2.5		mg/L	5	8/21/2019 11:05:55 AM	R62337
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 3:41:59 PM	B62802
Barium	1.2	0.0032	0.010		mg/L	5	9/10/2019 3:43:58 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 3:41:59 PM	B62802
Boron	0.40	0.0045	0.040		mg/L	1	9/10/2019 3:41:59 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 3:41:59 PM	B62802
Calcium	140	0.31	5.0		mg/L	5	9/10/2019 3:43:58 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 3:41:59 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 3:41:59 PM	B62802
Copper	ND	0.0013	0.0060		mg/L	1	9/10/2019 3:41:59 PM	B62802
Iron	6.8	0.087	0.20	*	mg/L	10	9/14/2019 10:16:09 AM	A62943
Magnesium	30	0.050	1.0		mg/L	1	9/10/2019 3:41:59 PM	B62802
Manganese	2.6	0.0014	0.010	*	mg/L	5	9/10/2019 3:43:58 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 3:41:59 PM	B62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 3:41:59 PM	B62802
Potassium	0.77	0.16	1.0	J	mg/L	1	9/10/2019 3:41:59 PM	B62802
Silver	0.0016	0.00094	0.0050	J	mg/L	1	9/10/2019 3:41:59 PM	B62802
Sodium	280	2.1	5.0		mg/L	5	9/10/2019 3:43:58 PM	B62802
Zinc	0.0040	0.0023	0.010	J	mg/L	1	9/10/2019 3:41:59 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.0	0.012	0.10	*	mg/L	5	8/30/2019 6:43:30 PM	47146
Barium	1.4	0.0032	0.010		mg/L	5	8/30/2019 6:43:30 PM	47146
Beryllium	ND	0.00028	0.0020		mg/L	1	8/30/2019 4:47:55 PM	47146
Boron	0.39	0.0045	0.040		mg/L	1	8/30/2019 4:47:55 PM	47146

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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-22
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 9:00:00 AM
Lab ID: 1908B79-006
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:47:55 PM	47146
Chromium	ND	0.0015	0.0060		mg/L	1	8/30/2019 4:47:55 PM	47146
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 4:47:55 PM	47146
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 4:47:55 PM	47146
Iron	8.5	0.17	0.40	*	mg/L	20	8/30/2019 6:45:26 PM	47146
Manganese	2.9	0.0014	0.010	*	mg/L	5	8/30/2019 6:43:30 PM	47146
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:47:55 PM	47146
Nickel	0.0049	0.0040	0.010	J	mg/L	1	8/30/2019 4:47:55 PM	47146
Silver	0.0020	0.0014	0.0050	J	mg/L	1	8/30/2019 4:47:55 PM	47146
Zinc	ND	0.0058	0.010		mg/L	1	8/30/2019 4:47:55 PM	47146
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00055	0.00039	0.0010	J	mg/L	1	9/4/2019 2:21:18 PM	A62654
Arsenic	0.0013	0.00010	0.0010		mg/L	1	9/4/2019 2:21:18 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:21:18 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:21:18 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:21:18 PM	A62654
Uranium	0.0021	0.000075	0.00050		mg/L	1	9/4/2019 2:21:18 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00041	0.00039	0.0010	J	mg/L	1	8/29/2019 6:07:50 PM	47146
Arsenic	0.0016	0.00031	0.0010		mg/L	1	8/29/2019 6:07:50 PM	47146
Lead	0.0010	0.000055	0.00050		mg/L	1	8/29/2019 6:07:50 PM	47146
Selenium	ND	0.00048	0.0010		mg/L	1	8/29/2019 6:07:50 PM	47146
Thallium	ND	0.000052	0.00050		mg/L	1	8/29/2019 6:07:50 PM	47146
Uranium	0.0023	0.000085	0.00050		mg/L	1	8/29/2019 6:07:50 PM	47146
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:10:39 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 3:00:00 PM	46954

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-22
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 9:00:00 AM
Lab ID: 1908B79-006
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 3:00:00 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 3:00:00 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Carbazole	6.9	2.9	10	J	µg/L	1	8/27/2019 3:00:00 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 3:00:00 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 3:00:00 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 3:00:00 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 3:00:00 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 3:00:00 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 3:00:00 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 3:00:00 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Fluorene	3.6	2.9	10	J	µg/L	1	8/27/2019 3:00:00 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-22
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 9:00:00 AM
Lab ID: 1908B79-006
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	35	3.1	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 3:00:00 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 3:00:00 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 3:00:00 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Naphthalene	11	4.1	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 3:00:00 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 3:00:00 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 3:00:00 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Phenol	22	8.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 3:00:00 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 3:00:00 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 3:00:00 PM	46954
Surr: 2-Fluorophenol	44.8	0	15-101		%Rec	1	8/27/2019 3:00:00 PM	46954
Surr: Phenol-d5	35.5	0	15-84.6		%Rec	1	8/27/2019 3:00:00 PM	46954
Surr: 2,4,6-Tribromophenol	56.1	0	27.8-112		%Rec	1	8/27/2019 3:00:00 PM	46954
Surr: Nitrobenzene-d5	69.9	0	33-113		%Rec	1	8/27/2019 3:00:00 PM	46954
Surr: 2-Fluorobiphenyl	65.5	0	26.6-107		%Rec	1	8/27/2019 3:00:00 PM	46954
Surr: 4-Terphenyl-d14	65.7	0	18.7-148		%Rec	1	8/27/2019 3:00:00 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	3200	33	200		µg/L	200	8/22/2019 7:56:00 PM	R62329
Toluene	8.7	7.0	20	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
Ethylbenzene	260	2.6	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Methyl tert-butyl ether (MTBE)	2700	9.1	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2,4-Trimethylbenzene	ND	4.3	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Naphthalene	13	5.5	40	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
1-Methylnaphthalene	34	6.3	80	J	µg/L	20	8/22/2019 8:20:00 PM	R62329

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-22
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 9:00:00 AM
Lab ID: 1908B79-006
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	ND	6.9	80		µg/L	20	8/22/2019 8:20:00 PM	R62329
Acetone	ND	24	200		µg/L	20	8/22/2019 8:20:00 PM	R62329
Bromobenzene	ND	4.9	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Bromodichloromethane	ND	2.7	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Bromoform	ND	5.8	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Bromomethane	ND	5.5	60		µg/L	20	8/22/2019 8:20:00 PM	R62329
2-Butanone	ND	42	200		µg/L	20	8/22/2019 8:20:00 PM	R62329
Carbon disulfide	ND	9.1	200		µg/L	20	8/22/2019 8:20:00 PM	R62329
Carbon Tetrachloride	ND	2.8	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Chlorobenzene	ND	3.9	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Chloroethane	ND	3.6	40		µg/L	20	8/22/2019 8:20:00 PM	R62329
Chloroform	ND	2.4	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Chloromethane	ND	6.4	60		µg/L	20	8/22/2019 8:20:00 PM	R62329
2-Chlorotoluene	ND	4.9	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
4-Chlorotoluene	ND	4.7	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
cis-1,2-DCE	8.9	3.8	20	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	8/22/2019 8:20:00 PM	R62329
Dibromochloromethane	ND	4.8	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Dibromomethane	ND	4.2	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,1-Dichloroethane	13	2.8	20	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
1,1-Dichloroethene	17	4.1	20	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2-Dichloropropane	ND	4.2	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,3-Dichloropropane	ND	4.0	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
2,2-Dichloropropane	ND	4.7	40		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,1-Dichloropropene	ND	3.3	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Hexachlorobutadiene	ND	6.2	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
2-Hexanone	ND	31	200		µg/L	20	8/22/2019 8:20:00 PM	R62329
Isopropylbenzene	16	3.8	20	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
4-Isopropyltoluene	6.2	4.3	20	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
4-Methyl-2-pentanone	ND	14	200		µg/L	20	8/22/2019 8:20:00 PM	R62329
Methylene Chloride	ND	3.1	60		µg/L	20	8/22/2019 8:20:00 PM	R62329
n-Butylbenzene	23	4.6	60	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
n-Propylbenzene	29	4.3	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
sec-Butylbenzene	7.8	5.0	20	J	µg/L	20	8/22/2019 8:20:00 PM	R62329

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Lab ID: 1908B79-006 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	3.8	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
tert-Butylbenzene	ND	4.1	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	8/22/2019 8:20:00 PM	R62329
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
trans-1,2-DCE	ND	3.6	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Trichlorofluoromethane	ND	3.8	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	8/22/2019 8:20:00 PM	R62329
Vinyl chloride	ND	3.6	20		µg/L	20	8/22/2019 8:20:00 PM	R62329
Xylenes, Total	14	9.1	30	J	µg/L	20	8/22/2019 8:20:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	96.7	0	70-130		%Rec	20	8/22/2019 8:20:00 PM	R62329
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	20	8/22/2019 8:20:00 PM	R62329
Surr: Dibromofluoromethane	95.3	0	70-130		%Rec	20	8/22/2019 8:20:00 PM	R62329
Surr: Toluene-d8	99.0	0	70-130		%Rec	20	8/22/2019 8:20:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	8.2	0.61	1.0		mg/L	20	8/24/2019 3:03:18 AM	G62400
Surr: BFB	99.2	0	70-130		%Rec	20	8/24/2019 3:03:18 AM	G62400

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-17
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 10:52:00 AM
Lab ID: 1908B79-007
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0095		µg/L	1	8/23/2019 9:47:00 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	3.3	0.35	1.0		mg/L	1	8/26/2019 6:47:04 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 6:47:04 PM	47020
Surr: DNOP	122	0	70-130		%Rec	1	8/26/2019 6:47:04 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.74	0.073	0.50		mg/L	5	8/21/2019 11:31:39 AM	R62337
Chloride	140	10	10		mg/L	20	8/21/2019 11:44:32 AM	R62337
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 11:31:39 AM	R62337
Bromide	1.4	0.089	0.50		mg/L	5	8/21/2019 11:31:39 AM	R62337
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/21/2019 11:31:39 AM	R62337
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 11:31:39 AM	R62337
Sulfate	14	0.33	2.5		mg/L	5	8/21/2019 11:31:39 AM	R62337
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 3:45:54 PM	B62802
Barium	0.98	0.00065	0.0020		mg/L	1	9/10/2019 3:45:54 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 3:45:54 PM	B62802
Boron	0.35	0.0045	0.040		mg/L	1	9/10/2019 3:45:54 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 3:45:54 PM	B62802
Calcium	120	0.31	5.0		mg/L	5	9/10/2019 3:48:05 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 3:45:54 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 3:45:54 PM	B62802
Copper	0.0021	0.0013	0.0060	J	mg/L	1	9/10/2019 3:45:54 PM	B62802
Iron	0.37	0.0087	0.020	*	mg/L	1	9/10/2019 3:45:54 PM	B62802
Magnesium	25	0.050	1.0		mg/L	1	9/10/2019 3:45:54 PM	B62802
Manganese	2.8	0.0014	0.010	*	mg/L	5	9/10/2019 3:48:05 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 3:45:54 PM	B62802
Nickel	0.0043	0.0040	0.010	J	mg/L	1	9/10/2019 3:45:54 PM	B62802
Potassium	0.60	0.16	1.0	J	mg/L	1	9/10/2019 3:45:54 PM	B62802
Silver	0.0019	0.00094	0.0050	J	mg/L	1	9/10/2019 3:45:54 PM	B62802
Sodium	280	2.1	5.0		mg/L	5	9/10/2019 3:48:05 PM	B62802
Zinc	0.0026	0.0023	0.010	J	mg/L	1	9/10/2019 3:45:54 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.4	0.012	0.10	*	mg/L	5	9/4/2019 7:02:48 PM	47146
Barium	1.1	0.0032	0.010		mg/L	5	8/30/2019 6:47:39 PM	47146
Beryllium	ND	0.00028	0.0020		mg/L	1	8/30/2019 4:49:53 PM	47146
Boron	0.36	0.0045	0.040		mg/L	1	8/30/2019 4:49:53 PM	47146

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Lab ID: 1908B79-007
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:49:53 PM	47146
Chromium	ND	0.0015	0.0060		mg/L	1	8/30/2019 4:49:53 PM	47146
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 4:49:53 PM	47146
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 4:49:53 PM	47146
Iron	3.0	0.044	0.10	*	mg/L	5	9/4/2019 7:02:48 PM	47146
Manganese	3.0	0.0014	0.010	*	mg/L	5	8/30/2019 6:47:39 PM	47146
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:49:53 PM	47146
Nickel	ND	0.0040	0.010		mg/L	1	8/30/2019 4:49:53 PM	47146
Silver	0.0019	0.0014	0.0050	J	mg/L	1	8/30/2019 4:49:53 PM	47146
Zinc	ND	0.0058	0.010		mg/L	1	8/30/2019 4:49:53 PM	47146
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00053	0.00039	0.0010	J	mg/L	1	9/4/2019 2:24:00 PM	A62654
Arsenic	0.0047	0.00010	0.0010		mg/L	1	9/4/2019 2:24:00 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:24:00 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:24:00 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:24:00 PM	A62654
Uranium	0.0033	0.000075	0.00050		mg/L	1	9/4/2019 2:24:00 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00070	0.00039	0.0010	J	mg/L	1	8/29/2019 6:14:26 PM	47146
Arsenic	0.0070	0.00031	0.0010		mg/L	1	8/29/2019 6:14:26 PM	47146
Lead	0.00050	0.000055	0.00050	J	mg/L	1	8/29/2019 6:14:26 PM	47146
Selenium	ND	0.00048	0.0010		mg/L	1	8/29/2019 6:14:26 PM	47146
Thallium	ND	0.000052	0.00050		mg/L	1	8/29/2019 6:14:26 PM	47146
Uranium	0.0036	0.000085	0.00050		mg/L	1	8/29/2019 6:14:26 PM	47146
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:12:56 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 3:29:57 PM	46954

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Lab ID: 1908B79-007
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 3:29:57 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 3:29:57 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 3:29:57 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 3:29:57 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 3:29:57 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 3:29:57 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 3:29:57 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 3:29:57 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 3:29:57 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 3:29:57 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954

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Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 10:52:00 AM
Lab ID: 1908B79-007
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	17	3.1	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 3:29:57 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 3:29:57 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 3:29:57 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Naphthalene	22	4.1	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 3:29:57 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 3:29:57 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 3:29:57 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 3:29:57 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 3:29:57 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 3:29:57 PM	46954
Surr: 2-Fluorophenol	2.89	0	15-101	S	%Rec	1	8/27/2019 3:29:57 PM	46954
Surr: Phenol-d5	13.2	0	15-84.6	S	%Rec	1	8/27/2019 3:29:57 PM	46954
Surr: 2,4,6-Tribromophenol	2.63	0	27.8-112	S	%Rec	1	8/27/2019 3:29:57 PM	46954
Surr: Nitrobenzene-d5	69.5	0	33-113		%Rec	1	8/27/2019 3:29:57 PM	46954
Surr: 2-Fluorobiphenyl	62.5	0	26.6-107		%Rec	1	8/27/2019 3:29:57 PM	46954
Surr: 4-Terphenyl-d14	61.3	0	18.7-148		%Rec	1	8/27/2019 3:29:57 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	870	8.3	50		µg/L	50	8/22/2019 8:44:00 PM	R62329
Toluene	2.6	1.8	5.0	J	µg/L	5	8/22/2019 9:08:00 PM	R62329
Ethylbenzene	640	6.6	50		µg/L	50	8/22/2019 8:44:00 PM	R62329
Methyl tert-butyl ether (MTBE)	4300	23	50		µg/L	50	8/22/2019 8:44:00 PM	R62329
1,2,4-Trimethylbenzene	88	1.1	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,3,5-Trimethylbenzene	1.8	0.94	5.0	J	µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Naphthalene	29	1.4	10		µg/L	5	8/22/2019 9:08:00 PM	R62329
1-Methylnaphthalene	24	1.6	20		µg/L	5	8/22/2019 9:08:00 PM	R62329

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Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	6.9	1.7	20	J	µg/L	5	8/22/2019 9:08:00 PM	R62329
Acetone	18	6.0	50	J	µg/L	5	8/22/2019 9:08:00 PM	R62329
Bromobenzene	ND	1.2	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Bromodichloromethane	ND	0.67	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Bromoform	ND	1.4	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Bromomethane	ND	1.4	15		µg/L	5	8/22/2019 9:08:00 PM	R62329
2-Butanone	ND	10	50		µg/L	5	8/22/2019 9:08:00 PM	R62329
Carbon disulfide	ND	2.3	50		µg/L	5	8/22/2019 9:08:00 PM	R62329
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Chlorobenzene	ND	0.97	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Chloroethane	ND	0.89	10		µg/L	5	8/22/2019 9:08:00 PM	R62329
Chloroform	ND	0.61	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Chloromethane	ND	1.6	15		µg/L	5	8/22/2019 9:08:00 PM	R62329
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	8/22/2019 9:08:00 PM	R62329
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Dibromomethane	ND	1.0	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
2,2-Dichloropropane	ND	1.2	10		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
2-Hexanone	ND	7.7	50		µg/L	5	8/22/2019 9:08:00 PM	R62329
Isopropylbenzene	34	0.96	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
4-Isopropyltoluene	1.8	1.1	5.0	J	µg/L	5	8/22/2019 9:08:00 PM	R62329
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	8/22/2019 9:08:00 PM	R62329
Methylene Chloride	ND	0.77	15		µg/L	5	8/22/2019 9:08:00 PM	R62329
n-Butylbenzene	6.7	1.1	15	J	µg/L	5	8/22/2019 9:08:00 PM	R62329
n-Propylbenzene	66	1.1	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
sec-Butylbenzene	4.7	1.2	5.0	J	µg/L	5	8/22/2019 9:08:00 PM	R62329

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-17
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 10:52:00 AM
Lab ID: 1908B79-007 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	0.96	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	8/22/2019 9:08:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	8/22/2019 9:08:00 PM	R62329
Vinyl chloride	ND	0.90	5.0		µg/L	5	8/22/2019 9:08:00 PM	R62329
Xylenes, Total	78	2.3	7.5		µg/L	5	8/22/2019 9:08:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	97.4	0	70-130		%Rec	5	8/22/2019 9:08:00 PM	R62329
Surr: 4-Bromofluorobenzene	99.3	0	70-130		%Rec	5	8/22/2019 9:08:00 PM	R62329
Surr: Dibromofluoromethane	93.9	0	70-130		%Rec	5	8/22/2019 9:08:00 PM	R62329
Surr: Toluene-d8	99.7	0	70-130		%Rec	5	8/22/2019 9:08:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	7.6	0.31	0.50		mg/L	10	8/24/2019 3:32:06 AM	G62400
Surr: BFB	97.0	0	70-130		%Rec	10	8/24/2019 3:32:06 AM	G62400

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-33
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 11:31:00 AM
Lab ID: 1908B79-008
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/23/2019 10:02:08 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/22/2019 8:03:56 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 8:03:56 PM	46957
Surr: DNOP	136	0	70-130	S	%Rec	1	8/22/2019 8:03:56 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.29	0.073	0.50	J	mg/L	5	8/21/2019 11:57:24 AM	R62337
Chloride	110	10	10		mg/L	20	8/21/2019 12:10:16 PM	R62337
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 11:57:24 AM	R62337
Bromide	0.80	0.089	0.50		mg/L	5	8/21/2019 11:57:24 AM	R62337
Nitrogen, Nitrate (As N)	0.14	0.025	0.50	J	mg/L	5	8/21/2019 11:57:24 AM	R62337
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 11:57:24 AM	R62337
Sulfate	170	0.33	2.5		mg/L	5	8/21/2019 11:57:24 AM	R62337
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 3:50:23 PM	B62802
Barium	0.069	0.00065	0.0020		mg/L	1	9/10/2019 3:50:23 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 3:50:23 PM	B62802
Boron	0.51	0.0045	0.040		mg/L	1	9/10/2019 3:50:23 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 3:50:23 PM	B62802
Calcium	78	0.062	1.0		mg/L	1	9/10/2019 3:50:23 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 3:50:23 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 3:50:23 PM	B62802
Copper	0.0023	0.0013	0.0060	J	mg/L	1	9/10/2019 3:50:23 PM	B62802
Iron	0.12	0.0087	0.020		mg/L	1	9/10/2019 3:50:23 PM	B62802
Magnesium	17	0.050	1.0		mg/L	1	9/10/2019 3:50:23 PM	B62802
Manganese	0.44	0.00029	0.0020	*	mg/L	1	9/10/2019 3:50:23 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 3:50:23 PM	B62802
Nickel	0.0043	0.0040	0.010	J	mg/L	1	9/10/2019 3:50:23 PM	B62802
Potassium	0.75	0.16	1.0	J	mg/L	1	9/10/2019 3:50:23 PM	B62802
Silver	0.0012	0.00094	0.0050	J	mg/L	1	9/10/2019 3:50:23 PM	B62802
Sodium	300	2.1	5.0		mg/L	5	9/10/2019 3:52:30 PM	B62802
Zinc	0.0040	0.0023	0.010	J	mg/L	1	9/10/2019 3:50:23 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.3	0.025	0.20	*	mg/L	10	8/30/2019 6:51:40 PM	47146
Barium	0.16	0.00065	0.0020		mg/L	1	8/30/2019 4:51:50 PM	47146
Beryllium	0.00046	0.00028	0.0020	J	mg/L	1	8/30/2019 4:51:50 PM	47146
Boron	0.51	0.0045	0.040		mg/L	1	8/30/2019 4:51:50 PM	47146

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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-33
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 11:31:00 AM
Lab ID: 1908B79-008 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:51:50 PM	47146
Chromium	ND	0.0015	0.0060		mg/L	1	8/30/2019 4:51:50 PM	47146
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 4:51:50 PM	47146
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 4:51:50 PM	47146
Iron	2.6	0.087	0.20	*	mg/L	10	9/9/2019 2:26:40 PM	47146
Manganese	0.57	0.00029	0.0020	*	mg/L	1	8/30/2019 4:51:50 PM	47146
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:51:50 PM	47146
Nickel	0.0064	0.0040	0.010	J	mg/L	1	8/30/2019 4:51:50 PM	47146
Silver	0.0015	0.0014	0.0050	J	mg/L	1	8/30/2019 4:51:50 PM	47146
Zinc	0.010	0.0058	0.010		mg/L	1	8/30/2019 4:51:50 PM	47146
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 2:26:41 PM	A62654
Arsenic	0.00042	0.00010	0.0010	J	mg/L	1	9/4/2019 2:26:41 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:26:41 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:26:41 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:26:41 PM	A62654
Uranium	0.033	0.00037	0.0025	*	mg/L	5	9/4/2019 3:07:09 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	8/29/2019 6:16:37 PM	47146
Arsenic	0.0010	0.00031	0.0010		mg/L	1	8/29/2019 6:16:37 PM	47146
Lead	0.0029	0.000055	0.00050		mg/L	1	8/29/2019 6:16:37 PM	47146
Selenium	0.00095	0.00048	0.0010	J	mg/L	1	8/29/2019 6:16:37 PM	47146
Thallium	0.000052	0.000052	0.00050	J	mg/L	1	8/29/2019 6:16:37 PM	47146
Uranium	0.035	0.00042	0.0025	*	mg/L	5	8/29/2019 6:27:51 PM	47146
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:15:12 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 3:59:46 PM	46954

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-33
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 11:31:00 AM
Lab ID: 1908B79-008
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 3:59:46 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 3:59:46 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 3:59:46 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 3:59:46 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 3:59:46 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 3:59:46 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 3:59:46 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 3:59:46 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 3:59:46 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 3:59:46 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-33
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 11:31:00 AM
Lab ID: 1908B79-008
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 3:59:46 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 3:59:46 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 3:59:46 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Naphthalene	ND	4.1	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 3:59:46 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 3:59:46 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 3:59:46 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 3:59:46 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 3:59:46 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 3:59:46 PM	46954
Surr: 2-Fluorophenol	40.2	0	15-101		%Rec	1	8/27/2019 3:59:46 PM	46954
Surr: Phenol-d5	30.7	0	15-84.6		%Rec	1	8/27/2019 3:59:46 PM	46954
Surr: 2,4,6-Tribromophenol	48.8	0	27.8-112		%Rec	1	8/27/2019 3:59:46 PM	46954
Surr: Nitrobenzene-d5	71.2	0	33-113		%Rec	1	8/27/2019 3:59:46 PM	46954
Surr: 2-Fluorobiphenyl	59.3	0	26.6-107		%Rec	1	8/27/2019 3:59:46 PM	46954
Surr: 4-Terphenyl-d14	68.8	0	18.7-148		%Rec	1	8/27/2019 3:59:46 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Methyl tert-butyl ether (MTBE)	730	4.6	10		µg/L	10	8/22/2019 9:32:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 9:56:00 PM	R62329

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-33
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 11:31:00 AM
Lab ID: 1908B79-008
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Acetone	ND	1.2	10		µg/L	1	8/22/2019 9:56:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 9:56:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 9:56:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 9:56:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 9:56:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
sec-Butylbenzene	0.47	0.25	1.0	J	µg/L	1	8/22/2019 9:56:00 PM	R62329

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: MTKF-33
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 11:31:00 AM
Lab ID: 1908B79-008 **Matrix:** AQUEOUS **Received Date:** 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 9:56:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 9:56:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	96.0	0	70-130		%Rec	1	8/22/2019 9:56:00 PM	R62329
Surr: 4-Bromofluorobenzene	97.0	0	70-130		%Rec	1	8/22/2019 9:56:00 PM	R62329
Surr: Dibromofluoromethane	93.5	0	70-130		%Rec	1	8/22/2019 9:56:00 PM	R62329
Surr: Toluene-d8	97.2	0	70-130		%Rec	1	8/22/2019 9:56:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	0.53	0.031	0.050		mg/L	1	8/24/2019 4:01:00 AM	G62400
Surr: BFB	102	0	70-130		%Rec	1	8/24/2019 4:01:00 AM	G62400

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: EB-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 12:02:00 PM
Lab ID: 1908B79-009
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/23/2019 10:17:24 AM	46981
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/22/2019 8:26:25 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 8:26:25 PM	46957
Surr: DNOP	133	0	70-130	S	%Rec	1	8/22/2019 8:26:25 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.015	0.10		mg/L	1	8/21/2019 12:23:08 PM	R62337
Chloride	ND	0.50	0.50		mg/L	1	8/21/2019 12:23:08 PM	R62337
Nitrogen, Nitrite (As N)	ND	0.0054	0.10		mg/L	1	8/21/2019 12:23:08 PM	R62337
Bromide	ND	0.018	0.10		mg/L	1	8/21/2019 12:23:08 PM	R62337
Nitrogen, Nitrate (As N)	0.059	0.0050	0.10	J	mg/L	1	8/21/2019 12:23:08 PM	R62337
Phosphorus, Orthophosphate (As P)	ND	0.25	0.50		mg/L	1	8/21/2019 12:23:08 PM	R62337
Sulfate	ND	0.067	0.50		mg/L	1	8/21/2019 12:23:08 PM	R62337
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 4:00:58 PM	B62802
Barium	ND	0.00065	0.0020		mg/L	1	9/10/2019 4:00:58 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 4:00:58 PM	B62802
Boron	0.010	0.0045	0.040	J	mg/L	1	9/10/2019 4:00:58 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 4:00:58 PM	B62802
Calcium	ND	0.062	1.0		mg/L	1	9/10/2019 4:00:58 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 4:00:58 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 4:00:58 PM	B62802
Copper	0.0014	0.0013	0.0060	J	mg/L	1	9/10/2019 4:00:58 PM	B62802
Iron	ND	0.0087	0.020		mg/L	1	9/10/2019 4:00:58 PM	B62802
Magnesium	ND	0.050	1.0		mg/L	1	9/10/2019 4:00:58 PM	B62802
Manganese	ND	0.00029	0.0020		mg/L	1	9/10/2019 4:00:58 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 4:00:58 PM	B62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 4:00:58 PM	B62802
Potassium	ND	0.16	1.0		mg/L	1	9/10/2019 4:00:58 PM	B62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 4:00:58 PM	B62802
Sodium	ND	0.42	1.0		mg/L	1	9/10/2019 4:00:58 PM	B62802
Zinc	0.0039	0.0023	0.010	J	mg/L	1	9/10/2019 4:00:58 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	8/30/2019 2:59:10 PM	A62563
Barium	ND	0.00065	0.0020		mg/L	1	8/30/2019 2:59:10 PM	A62563
Beryllium	ND	0.00028	0.0020		mg/L	1	8/30/2019 2:59:10 PM	A62563
Boron	0.0089	0.0045	0.040	J	mg/L	1	8/30/2019 2:59:10 PM	A62563

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: EB-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 12:02:00 PM
Lab ID: 1908B79-009
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 2:59:10 PM	A62563
Chromium	ND	0.0015	0.0060		mg/L	1	8/30/2019 2:59:10 PM	A62563
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 2:59:10 PM	A62563
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 2:59:10 PM	A62563
Iron	ND	0.0087	0.020		mg/L	1	8/30/2019 2:59:10 PM	A62563
Manganese	ND	0.00029	0.0020		mg/L	1	8/30/2019 2:59:10 PM	A62563
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 2:59:10 PM	A62563
Nickel	ND	0.0040	0.010		mg/L	1	8/30/2019 2:59:10 PM	A62563
Silver	ND	0.0014	0.0050		mg/L	1	8/30/2019 2:59:10 PM	A62563
Zinc	ND	0.0058	0.010		mg/L	1	8/30/2019 2:59:10 PM	A62563
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 2:29:23 PM	A62654
Arsenic	ND	0.00010	0.0010		mg/L	1	9/4/2019 2:29:23 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:29:23 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:29:23 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:29:23 PM	A62654
Uranium	ND	0.000075	0.00050		mg/L	1	9/4/2019 2:29:23 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 4:30:17 PM	B62654
Arsenic	ND	0.00031	0.0010		mg/L	1	8/30/2019 3:52:11 PM	B62562
Lead	ND	0.000055	0.00050		mg/L	1	8/30/2019 3:52:11 PM	B62562
Selenium	ND	0.00048	0.0010		mg/L	1	9/4/2019 4:30:17 PM	B62654
Thallium	ND	0.000052	0.00050		mg/L	1	8/30/2019 3:52:11 PM	B62562
Uranium	ND	0.000085	0.00050		mg/L	1	8/30/2019 3:52:11 PM	B62562
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:17:30 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 4:29:40 PM	46954

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: EB-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 12:02:00 PM
Lab ID: 1908B79-009
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 4:29:40 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 4:29:40 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 4:29:40 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 4:29:40 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 4:29:40 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 4:29:40 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 4:29:40 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 4:29:40 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 4:29:40 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 4:29:40 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: EB-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 12:02:00 PM
Lab ID: 1908B79-009
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 4:29:40 PM	46954
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 4:29:40 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 4:29:40 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Naphthalene	ND	4.1	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 4:29:40 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 4:29:40 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 4:29:40 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 4:29:40 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 4:29:40 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 4:29:40 PM	46954
Surr: 2-Fluorophenol	45.6	0	15-101		%Rec	1	8/27/2019 4:29:40 PM	46954
Surr: Phenol-d5	36.4	0	15-84.6		%Rec	1	8/27/2019 4:29:40 PM	46954
Surr: 2,4,6-Tribromophenol	50.5	0	27.8-112		%Rec	1	8/27/2019 4:29:40 PM	46954
Surr: Nitrobenzene-d5	62.9	0	33-113		%Rec	1	8/27/2019 4:29:40 PM	46954
Surr: 2-Fluorobiphenyl	55.1	0	26.6-107		%Rec	1	8/27/2019 4:29:40 PM	46954
Surr: 4-Terphenyl-d14	69.7	0	18.7-148		%Rec	1	8/27/2019 4:29:40 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Toluene	ND	0.35	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Naphthalene	ND	0.28	2.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/22/2019 10:21:00 PM	R62329

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ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: EB-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 12:02:00 PM
Lab ID: 1908B79-009
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Acetone	3.1	1.2	10	J	µg/L	1	8/22/2019 10:21:00 PM	R62329
Bromobenzene	ND	0.24	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Bromoform	ND	0.29	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Bromomethane	ND	0.27	3.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
2-Butanone	ND	2.1	10		µg/L	1	8/22/2019 10:21:00 PM	R62329
Carbon disulfide	ND	0.45	10		µg/L	1	8/22/2019 10:21:00 PM	R62329
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Chloroethane	ND	0.18	2.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Chloroform	ND	0.12	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Chloromethane	ND	0.32	3.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Dibromomethane	ND	0.21	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
2-Hexanone	ND	1.5	10		µg/L	1	8/22/2019 10:21:00 PM	R62329
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/22/2019 10:21:00 PM	R62329
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: EB-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 12:02:00 PM
Lab ID: 1908B79-009
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Styrene	ND	0.19	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/22/2019 10:21:00 PM	R62329
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/22/2019 10:21:00 PM	R62329
Surr: 1,2-Dichloroethane-d4	98.9	0	70-130		%Rec	1	8/22/2019 10:21:00 PM	R62329
Surr: 4-Bromofluorobenzene	97.0	0	70-130		%Rec	1	8/22/2019 10:21:00 PM	R62329
Surr: Dibromofluoromethane	95.8	0	70-130		%Rec	1	8/22/2019 10:21:00 PM	R62329
Surr: Toluene-d8	98.1	0	70-130		%Rec	1	8/22/2019 10:21:00 PM	R62329
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	8/24/2019 4:29:55 AM	G62400
Surr: BFB	98.4	0	70-130		%Rec	1	8/24/2019 4:29:55 AM	G62400

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A62563** RunNo: **62563**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128811** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **A62563** RunNo: **62563**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	107	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0021	0.0020	0.002000	0	103	50	150			
Boron	0.039	0.040	0.04000	0	97.7	50	150			J
Cadmium	0.0025	0.0020	0.002000	0	126	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.0	50	150			J
Cobalt	0.0052	0.0060	0.006000	0	86.0	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.5	50	150			J
Molybdenum	0.0091	0.0080	0.008000	0	114	50	150			
Nickel	0.0035	0.010	0.005000	0	70.3	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.9	50	150			J
Zinc	0.011	0.010	0.01000	0	108	50	150			

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **A62563** RunNo: **62563**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **A62563** RunNo: **62563**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2128813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.6	85	115			
Barium	0.48	0.0020	0.5000	0	96.2	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.1	85	115			
Boron	0.50	0.040	0.5000	0	99.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.1	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.7	85	115			
Nickel	0.48	0.010	0.5000	0	95.4	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.49	0.010	0.5000	0	97.6	85	115			

Sample ID: **MB-47146** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **47146** RunNo: **62563**
Prep Date: **8/28/2019** Analysis Date: **8/30/2019** SeqNo: **2128817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-47146** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **47146** RunNo: **62563**
Prep Date: **8/28/2019** Analysis Date: **8/30/2019** SeqNo: **2128818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LLLCS-47146** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **47146** RunNo: **62563**
Prep Date: **8/28/2019** Analysis Date: **8/30/2019** SeqNo: **2128818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	121	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.3	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.039	0.040	0.04000	0	96.8	50	150			J
Cadmium	0.0023	0.0020	0.002000	0	117	50	150			
Chromium	0.0060	0.0060	0.006000	0	101	50	150			
Cobalt	0.0051	0.0060	0.006000	0	84.7	50	150			J
Copper	0.0058	0.0060	0.006000	0	96.7	50	150			J
Iron	0.023	0.020	0.02000	0	113	50	150			
Manganese	0.0020	0.0020	0.002000	0	97.9	50	150			J
Molybdenum	0.0087	0.0080	0.008000	0	108	50	150			
Nickel	0.0030	0.010	0.005000	0	60.3	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.7	50	150			J
Zinc	0.014	0.010	0.01000	0	137	50	150			

Sample ID: **LCS-47146** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **47146** RunNo: **62563**
Prep Date: **8/28/2019** Analysis Date: **8/30/2019** SeqNo: **2128819** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	101	85	115			
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.4	85	115			
Boron	0.49	0.040	0.5000	0	97.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.7	85	115			
Chromium	0.49	0.0060	0.5000	0	97.2	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.5	85	115			
Iron	0.48	0.020	0.5000	0	95.9	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.8	85	115			
Nickel	0.47	0.010	0.5000	0	94.6	85	115			
Silver	0.098	0.0050	0.1000	0	98.5	85	115			
Zinc	0.49	0.010	0.5000	0	97.5	85	115			

Sample ID: **1908B79-002GMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-34** Batch ID: **47146** RunNo: **62563**
Prep Date: **8/28/2019** Analysis Date: **8/30/2019** SeqNo: **2129525** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **1908B79-002GMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-34** Batch ID: **47146** RunNo: **62563**
Prep Date: **8/28/2019** Analysis Date: **8/30/2019** SeqNo: **2129525** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.66	0.0020	0.5000	0.1884	93.6	70	130			
Beryllium	0.51	0.0020	0.5000	0.0003134	103	70	130			
Boron	0.91	0.040	0.5000	0.4287	97.0	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.2	70	130			
Chromium	0.49	0.0060	0.5000	0	98.1	70	130			
Cobalt	0.49	0.0060	0.5000	0	98.3	70	130			
Copper	0.48	0.0060	0.5000	0	97.0	70	130			
Manganese	0.54	0.0020	0.5000	0.04526	98.4	70	130			
Molybdenum	0.49	0.0080	0.5000	0	97.1	70	130			
Nickel	0.47	0.010	0.5000	0	93.9	70	130			
Silver	0.096	0.0050	0.1000	0.001893	93.7	70	130			
Zinc	0.53	0.010	0.5000	0.01700	103	70	130			

Sample ID: **1908B79-002GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-34** Batch ID: **47146** RunNo: **62563**
Prep Date: **8/28/2019** Analysis Date: **8/30/2019** SeqNo: **2129526** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.66	0.0020	0.5000	0.1884	93.5	70	130	0.101	20	
Beryllium	0.51	0.0020	0.5000	0.0003134	103	70	130	0.312	20	
Boron	0.92	0.040	0.5000	0.4287	97.6	70	130	0.352	20	
Cadmium	0.50	0.0020	0.5000	0	99.3	70	130	0.120	20	
Chromium	0.49	0.0060	0.5000	0	98.9	70	130	0.852	20	
Cobalt	0.49	0.0060	0.5000	0	98.2	70	130	0.0468	20	
Copper	0.49	0.0060	0.5000	0	97.7	70	130	0.791	20	
Manganese	0.54	0.0020	0.5000	0.04526	99.2	70	130	0.721	20	
Molybdenum	0.49	0.0080	0.5000	0	97.5	70	130	0.417	20	
Nickel	0.47	0.010	0.5000	0	93.7	70	130	0.150	20	
Silver	0.096	0.0050	0.1000	0.001893	94.4	70	130	0.760	20	
Zinc	0.53	0.010	0.5000	0.01700	103	70	130	0.302	20	

Sample ID: **1908B79-002GMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-34** Batch ID: **47146** RunNo: **62659**
Prep Date: **8/28/2019** Analysis Date: **9/4/2019** SeqNo: **2133396** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	4.6	0.10	0.5000	4.061	118	70	130			
Iron	2.5	0.10	0.5000	2.004	90.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **1908B79-002GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-34** Batch ID: **47146** RunNo: **62659**
Prep Date: **8/28/2019** Analysis Date: **9/4/2019** SeqNo: **2133397** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	4.7	0.10	0.5000	4.061	126	70	130	0.896	20	
Iron	2.4	0.10	0.5000	2.004	77.1	70	130	2.72	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129968** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129969** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	107	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0021	0.0020	0.002000	0	103	50	150			
Boron	0.039	0.040	0.04000	0	97.7	50	150			J
Cadmium	0.0025	0.0020	0.002000	0	126	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.0	50	150			J
Cobalt	0.0052	0.0060	0.006000	0	86.0	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.5	50	150			J
Molybdenum	0.0091	0.0080	0.008000	0	114	50	150			
Nickel	0.0035	0.010	0.005000	0	70.3	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.9	50	150			J
Zinc	0.011	0.010	0.01000	0	108	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.6	85	115			
Barium	0.48	0.0020	0.5000	0	96.2	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.1	85	115			
Boron	0.50	0.040	0.5000	0	99.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.1	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.7	85	115			
Nickel	0.48	0.010	0.5000	0	95.4	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.49	0.010	0.5000	0	97.6	85	115			

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B62802** RunNo: **62802**
Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0094	0.020	0.01000	0	93.6	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.2	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	96.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.7	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	105	50	150			
Calcium	0.54	1.0	0.5000	0	107	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Cobalt	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0065	0.0060	0.006000	0	109	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.53	1.0	0.5000	0	106	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0094	0.0080	0.008000	0	117	50	150			
Nickel	0.0048	0.010	0.005000	0	96.8	50	150			J
Potassium	0.48	1.0	0.5000	0	96.4	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.6	50	150			J
Sodium	0.52	1.0	0.5000	0	105	50	150			J
Zinc	0.011	0.010	0.01000	0	106	50	150			

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B62802** RunNo: **62802**
Prep Date: Analysis Date: **9/10/2019** SeqNo: **2139482** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	107	85	115			
Barium	0.48	0.0020	0.5000	0	95.1	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.3	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.5	85	115			
Copper	0.49	0.0060	0.5000	0	97.7	85	115			
Iron	0.49	0.020	0.5000	0	98.0	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.4	85	115			
Nickel	0.48	0.010	0.5000	0	95.8	85	115			
Potassium	49	1.0	50.00	0	98.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139482** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.3	85	115			
Sodium	50	1.0	50.00	0	99.4	85	115			
Zinc	0.49	0.010	0.5000	0	98.4	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145666** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145667** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.020	0.020	0.02000	0	101	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47146** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **47146** RunNo: **62528**
Prep Date: **8/28/2019** Analysis Date: **8/29/2019** SeqNo: **2128191** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-47146** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **47146** RunNo: **62528**
Prep Date: **8/28/2019** Analysis Date: **8/29/2019** SeqNo: **2128192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00084	0.0010	0.001000	0	84.2	50	150			J
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00052	0.00050	0.0005000	0	103	50	150			
Selenium	0.0011	0.0010	0.001000	0	114	50	150			
Thallium	0.00047	0.00050	0.0005000	0	94.4	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **MSLCS-47146** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **47146** RunNo: **62528**
Prep Date: **8/28/2019** Analysis Date: **8/29/2019** SeqNo: **2128193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	103	85	115			
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.025	0.0010	0.02500	0	98.5	85	115			
Thallium	0.012	0.00050	0.01250	0	99.1	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **1908B79-001GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-35** Batch ID: **47146** RunNo: **62528**
Prep Date: **8/28/2019** Analysis Date: **8/29/2019** SeqNo: **2128195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.030	0.0010	0.02500	0.004008	103	70	130			
Lead	0.023	0.00050	0.01250	0.01101	96.8	70	130			
Selenium	0.025	0.0010	0.02500	0.001675	94.3	70	130			
Thallium	0.012	0.00050	0.01250	0.0001468	96.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **1908B79-001GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-35** Batch ID: **47146** RunNo: **62528**
Prep Date: **8/28/2019** Analysis Date: **8/29/2019** SeqNo: **2128195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.022	0.00050	0.01250	0.008934	104	70	130			

Sample ID: **1908B79-001GMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-35** Batch ID: **47146** RunNo: **62528**
Prep Date: **8/28/2019** Analysis Date: **8/29/2019** SeqNo: **2128196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.030	0.0010	0.02500	0.004008	103	70	130	0.386	20	
Lead	0.023	0.00050	0.01250	0.01101	97.7	70	130	0.503	20	
Selenium	0.027	0.0010	0.02500	0.001675	99.9	70	130	5.40	20	
Thallium	0.012	0.00050	0.01250	0.0001468	95.2	70	130	1.29	20	
Uranium	0.022	0.00050	0.01250	0.008934	103	70	130	0.442	20	

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **B62562** RunNo: **62562**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2129994** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Thallium	0.00049	0.00050	0.0005000	0	97.7	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **B62562** RunNo: **62562**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2129995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Thallium	0.012	0.00050	0.01250	0	97.1	85	115			
Uranium	0.012	0.00050	0.01250	0	95.4	85	115			

Sample ID: **1908B79-001GMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-35** Batch ID: **47146** RunNo: **62606**
Prep Date: **8/28/2019** Analysis Date: **9/3/2019** SeqNo: **2131109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0066	0.0050	0.02500	0	26.4	70	130			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**

24-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW Sampling

Sample ID: **1908B79-001GMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**

Client ID: **MKTF-35** Batch ID: **47146** RunNo: **62606**

Prep Date: **8/28/2019** Analysis Date: **9/3/2019** SeqNo: **2131110** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0085	0.0050	0.02500	0	33.9	70	130	24.8	20	RS

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Metals**

Client ID: **PBW** Batch ID: **B62654** RunNo: **62654**

Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00053	0.0010								J
Selenium	ND	0.0010								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**

Client ID: **BatchQC** Batch ID: **B62654** RunNo: **62654**

Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133279** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	108	50	150			
Selenium	0.00097	0.0010	0.001000	0	96.9	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Metals**

Client ID: **LCSW** Batch ID: **B62654** RunNo: **62654**

Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B62562** RunNo: **62562**
Prep Date: Analysis Date: **8/30/2019** SeqNo: **2129993** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	101	50	150			
Arsenic	0.00096	0.0010	0.001000	0	96.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.5	50	150			J
Selenium	0.00086	0.0010	0.001000	0	85.7	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	94.7	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133217** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.8	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.7	85	115			
Selenium	0.022	0.0010	0.02500	0	89.8	85	115			
Thallium	0.012	0.00050	0.01250	0	96.0	85	115			
Uranium	0.012	0.00050	0.01250	0	95.7	85	115			

Sample ID: **1908B79-001FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-35** Batch ID: **A62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133223** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0.0004468	97.4	70	130			
Arsenic	0.027	0.0010	0.02500	0.001392	103	70	130			
Lead	0.012	0.00050	0.01250	.00008937	96.0	70	130			
Selenium	0.026	0.0010	0.02500	0	102	70	130			
Thallium	0.012	0.00050	0.01250	0	96.4	70	130			
Uranium	0.020	0.00050	0.01250	0.007425	101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133275** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47321**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **47321**	RunNo: **62727**
Prep Date: **9/6/2019**	Analysis Date: **9/6/2019**	SeqNo: **2136134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-47321**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **47321**	RunNo: **62727**
Prep Date: **9/6/2019**	Analysis Date: **9/6/2019**	SeqNo: **2136135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A62287**	RunNo: **62287**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116400** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A62287**	RunNo: **62287**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116401** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	5.0	0.50	5.000	0	100	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.4	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.0	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62337**	RunNo: **62337**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2118449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62337**	RunNo: **62337**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2118450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62337**	RunNo: **62337**
Prep Date:	Analysis Date: **8/21/2019**	SeqNo: **2118450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.9	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	93.9	90	110			
Bromide	2.4	0.10	2.500	0	97.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.2	90	110			
Sulfate	9.7	0.50	10.00	0	96.6	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62640**	RunNo: **62640**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133595** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62640**	RunNo: **62640**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133596** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-46981**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **46981**	RunNo: **62366**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119535** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-46981**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **46981**	RunNo: **62366**
Prep Date: **8/22/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119537** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.091	0.010	0.1000	0	90.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**

24-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW Sampling

Sample ID: **1908B79-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-35**	Batch ID: **46957**	RunNo: **62322**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.3	1.0	5.000	0.7208	111	68.1	137			
Surr: DNOP	0.56		0.5000		112	70	130			

Sample ID: **1908B79-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-35**	Batch ID: **46957**	RunNo: **62322**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119351** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.6	1.0	5.000	0.7208	117	68.1	137	4.78	20	
Surr: DNOP	0.57		0.5000		115	70	130	0	0	

Sample ID: **LCS-46957**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **46957**	RunNo: **62322**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	114	71.8	135			
Surr: DNOP	0.56		0.5000		111	70	130			

Sample ID: **MB-46957**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **46957**	RunNo: **62322**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		123	70	130			

Sample ID: **MB-47020**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **47020**	RunNo: **62411**
Prep Date: **8/23/2019**	Analysis Date: **8/26/2019**	SeqNo: **2122349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.86		1.000		85.7	70	130			

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-47020** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **47020** RunNo: **62439**
Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	111	71.8	135			
Surr: DNOP	0.57		0.5000		114	70	130			

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119902** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.6	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.2	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.8	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62329**	RunNo: **62329**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2119903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.8	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.8	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Qualifiers:

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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **lcs-46954** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **46954** RunNo: **62456**
Prep Date: **8/21/2019** Analysis Date: **8/27/2019** SeqNo: **2123966** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	98	10	100.0	0	97.5	32.2	94			S
4-Chloro-3-methylphenol	180	10	200.0	0	91.7	37.7	101			
2-Chlorophenol	190	10	200.0	0	93.6	32.6	90.1			S
1,4-Dichlorobenzene	74	10	100.0	0	73.5	30	87.2			
2,4-Dinitrotoluene	82	10	100.0	0	81.7	35.9	85.8			
N-Nitrosodi-n-propylamine	93	10	100.0	0	93.2	37.1	108			
4-Nitrophenol	100	10	200.0	0	49.8	22.4	86.6			
Pentachlorophenol	150	20	200.0	0	77.3	31.6	91			
Phenol	120	10	200.0	0	61.9	21.7	84.9			
Pyrene	84	10	100.0	0	83.8	46.3	103			
1,2,4-Trichlorobenzene	77	10	100.0	0	77.4	30.2	88.3			
Surr: 2-Fluorophenol	110		200.0		56.8	15	101			
Surr: Phenol-d5	97		200.0		48.4	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		78.2	27.8	112			
Surr: Nitrobenzene-d5	87		100.0		87.2	33	113			
Surr: 2-Fluorobiphenyl	77		100.0		77.0	26.6	107			
Surr: 4-Terphenyl-d14	79		100.0		79.0	18.7	148			

Sample ID: **lcsd-46954** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **46954** RunNo: **62456**
Prep Date: **8/21/2019** Analysis Date: **8/27/2019** SeqNo: **2123968** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	91	10	100.0	0	90.5	32.2	94	7.44	32.9	
4-Chloro-3-methylphenol	190	10	200.0	0	95.3	37.7	101	3.87	29.9	
2-Chlorophenol	160	10	200.0	0	80.6	32.6	90.1	15.0	28.5	
1,4-Dichlorobenzene	72	10	100.0	0	72.1	15	87.2	1.98	44.9	
2,4-Dinitrotoluene	82	10	100.0	0	81.7	35.9	85.8	0.0245	28.5	
N-Nitrosodi-n-propylamine	94	10	100.0	0	93.8	37.1	108	0.641	29.9	
4-Nitrophenol	20	10	200.0	0	10.0	15	86.6	133	68	RS
Pentachlorophenol	49	20	200.0	0	24.4	31.6	91	104	39.5	RS
Phenol	120	10	200.0	0	59.5	15	84.9	3.99	44.2	
Pyrene	94	10	100.0	0	93.5	46.3	103	11.0	23.8	
1,2,4-Trichlorobenzene	80	10	100.0	0	79.6	15.7	88.3	2.80	38	
Surr: 2-Fluorophenol	75		200.0		37.7	15	101	0	0	
Surr: Phenol-d5	95		200.0		47.4	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	100		200.0		52.2	27.8	112	0	0	
Surr: Nitrobenzene-d5	90		100.0		89.9	33	113	0	0	
Surr: 2-Fluorobiphenyl	75		100.0		75.1	26.6	107	0	0	

Qualifiers:

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H	Holding times for preparation or analysis exceeded
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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **lcsd-46954**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **LCSS02**	Batch ID: **46954**	RunNo: **62456**							
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123968**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	89		100.0		89.1	18.7	148	0	0	

Sample ID: **mb-46954**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **PBW**	Batch ID: **46954**	RunNo: **62456**							
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123970**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

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S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **mb-46954**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**
24-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW Sampling

Sample ID: **mb-46954** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **46954** RunNo: **62456**
Prep Date: **8/21/2019** Analysis Date: **8/27/2019** SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	66		200.0		33.0	15	101			
Surr: Phenol-d5	50		200.0		25.2	15	84.6			
Surr: 2,4,6-Tribromophenol	83		200.0		41.4	27.8	112			
Surr: Nitrobenzene-d5	45		100.0		45.3	33	113			
Surr: 2-Fluorobiphenyl	40		100.0		40.3	26.6	107			
Surr: 4-Terphenyl-d14	50		100.0		50.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B79**

24-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW Sampling

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121104** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	96.1	70	130			
Surr: BFB	9.9		10.00		99.4	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121105** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1908B79** RcptNo: 1

Received By: **Desiree Dominguez** **8/20/2019 4:03:00 PM** DD

Completed By: **Leah Baca** **8/20/2019 4:44:36 PM** Leah Baca

Reviewed By: unpreserved 8/20/19 @ 1730 MN 08/21/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 24 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DAD 8/21/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			
2	1.9	Good	Yes			
3	2.7	Good	Yes			

Chain-of-Custody Record

Client: Western

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: 2019 Annual GW Sampling

Project #: MKTF Wells

Project Manager: Brian Moore

Sampler: PH/VW

On Ice: ☒ Yes ☐ No

Sample Temperature: See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Cations	~~Soil~~	Metals (Total + Diss.)		Air Bubbles (Y or N)
				Misc.	Misc.	1908879																
8/19/19	1348	W	MKTF-35	~~40ml VOA~~	~~HCl~~	-001			X		X	X		X		X		X		X		
8/19/19	1111	W	MKTF-34	Misc.	Misc.	-002			X		X	X		X		X		X		X		
8/19/19	1535	W	MKTF-19	Misc.	Misc.	-003			X		X	X		X		X		X		X		
8/19/19	—	W	DUP-20190819-1	Misc.	Misc.	-004			X		X	X		X		X		X		X		
8/19/19	1214	W	TB	Misc.	Misc.	-005										X						
8/20/19	900	W	MTKF-22	Misc.	Misc	-006			X		X	X		X		X		X		X		
~~8/20/19~~		~~W~~	~~DUP-2-8270~~	~~HCl~~	~~N~~							X										
8/20/19	1052	W	MTKF-17	Misc.	Misc.	-007			X		X	X		X		X		X		X		
8/20/19	1131	W	MTKF-33	Misc.	Misc.	-008			X		X	X		X		X		X		X		
8/20/19	1202	W	EB-1	Misc.	Misc.	-009			X		X	X		X		X		X		X		

Date	Time	Relinquished by:	Received by:	Date	Time
8/20/19	1216			8/20/19	1400
8/20/19	1603		CDO	8/20/19	~~1403~~ 16.03

Remarks:
4.2 - 0.2 = 4.0%
2.1 - 0.2 = 1.9%
2.9 - 0.2 = 2.7%
DAD 8/20/19

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 18, 2019

Cheryl Johnson

Western Refining Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2019 Annual GW OrderNo.: 1908B82

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/20/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1908B82**
Date Reported: **9/18/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-63
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:26:00 PM
Lab ID: 1908B82-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	6.2	0.35	1.0		mg/L	1	8/26/2019 7:09:38 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 7:09:38 PM	47020
Surr: DNOP	122	0	70-130		%Rec	1	8/26/2019 7:09:38 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.47	0.073	0.50	J	mg/L	5	8/21/2019 3:20:22 AM	A62276
Chloride	85	10	10		mg/L	20	8/21/2019 3:33:13 AM	A62276
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 3:20:22 AM	A62276
Bromide	0.44	0.089	0.50	J	mg/L	5	8/21/2019 3:20:22 AM	A62276
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/21/2019 3:20:22 AM	A62276
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 3:20:22 AM	A62276
Sulfate	ND	0.33	2.5		mg/L	5	8/21/2019 3:20:22 AM	A62276
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/10/2019 4:05:15 PM	B62802
Barium	4.1	0.0032	0.010	*	mg/L	5	9/10/2019 4:07:12 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 4:05:15 PM	B62802
Boron	0.33	0.0045	0.040		mg/L	1	9/10/2019 4:05:15 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 4:05:15 PM	B62802
Calcium	80	0.062	1.0		mg/L	1	9/10/2019 4:05:15 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 4:05:15 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 4:05:15 PM	B62802
Copper	0.0020	0.0013	0.0060	J	mg/L	1	9/10/2019 4:05:15 PM	B62802
Iron	6.1	0.087	0.20	*	mg/L	10	9/14/2019 10:18:22 AM	A62943
Magnesium	15	0.050	1.0		mg/L	1	9/10/2019 4:05:15 PM	B62802
Manganese	1.0	0.00029	0.0020	*	mg/L	1	9/10/2019 4:05:15 PM	B62802
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/10/2019 4:05:15 PM	B62802
Nickel	0.029	0.0040	0.010		mg/L	1	9/10/2019 4:05:15 PM	B62802
Potassium	0.51	0.16	1.0	J	mg/L	1	9/10/2019 4:05:15 PM	B62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 4:05:15 PM	B62802
Sodium	320	2.1	5.0		mg/L	5	9/10/2019 4:07:12 PM	B62802
Zinc	0.0055	0.0023	0.010	J	mg/L	1	9/10/2019 4:05:15 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.022	0.0025	0.020		mg/L	1	8/30/2019 4:55:54 PM	47174
Barium	4.1	0.0065	0.020	*	mg/L	10	8/30/2019 6:53:53 PM	47174
Beryllium	ND	0.00028	0.0020		mg/L	1	8/30/2019 4:55:54 PM	47174
Boron	0.32	0.0045	0.040		mg/L	1	8/30/2019 4:55:54 PM	47174
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:55:54 PM	47174
Chromium	ND	0.0015	0.0060		mg/L	1	8/30/2019 4:55:54 PM	47174
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 4:55:54 PM	47174

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-63
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:26:00 PM
Lab ID: 1908B82-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 4:55:54 PM	47174
Iron	6.1	0.087	0.20	*	mg/L	10	9/4/2019 7:06:51 PM	47174
Manganese	1.1	0.0029	0.020	*	mg/L	10	8/30/2019 6:53:53 PM	47174
Molybdenum	ND	0.0067	0.0080		mg/L	1	8/30/2019 4:55:54 PM	47174
Nickel	0.029	0.0040	0.010		mg/L	1	8/30/2019 4:55:54 PM	47174
Silver	ND	0.0014	0.0050		mg/L	1	8/30/2019 4:55:54 PM	47174
Zinc	ND	0.0058	0.010		mg/L	1	8/30/2019 4:55:54 PM	47174
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 2:32:05 PM	A62654
Arsenic	0.010	0.00010	0.0010	*	mg/L	1	9/4/2019 2:32:05 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:32:05 PM	A62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 2:32:05 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:32:05 PM	A62654
Uranium	ND	0.000075	0.00050		mg/L	1	9/4/2019 2:32:05 PM	A62654
EPA 200.8: METALS							Analyst: **JLF**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/3/2019 5:07:08 PM	47174
Arsenic	0.011	0.00031	0.0010	*	mg/L	1	9/3/2019 5:07:08 PM	47174
Lead	0.00027	0.000055	0.00050	J	mg/L	1	9/3/2019 5:07:08 PM	47174
Selenium	ND	0.00048	0.0010		mg/L	1	9/3/2019 5:07:08 PM	47174
Thallium	ND	0.000052	0.00050		mg/L	1	9/3/2019 5:07:08 PM	47174
Uranium	ND	0.000085	0.00050		mg/L	1	9/3/2019 5:07:08 PM	47174
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:22:07 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 4:59:41 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 4:59:41 PM	46954

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-63
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:26:00 PM
Lab ID: 1908B82-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 4:59:41 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Carbazole	4.2	2.9	10	J	µg/L	1	8/27/2019 4:59:41 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 4:59:41 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 4:59:41 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 4:59:41 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 4:59:41 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 4:59:41 PM	46954
2,4-Dimethylphenol	8.9	3.0	10	J	µg/L	1	8/27/2019 4:59:41 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 4:59:41 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 4:59:41 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
1-Methylnaphthalene	50	3.1	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2-Methylnaphthalene	61	3.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 4:59:41 PM	46954

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-63
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:26:00 PM
Lab ID: 1908B82-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 4:59:41 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 4:59:41 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Naphthalene	180	4.1	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 4:59:41 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 4:59:41 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 4:59:41 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Phenol	18	8.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 4:59:41 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 4:59:41 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 4:59:41 PM	46954
Surr: 2-Fluorophenol	36.8	0	15-101		%Rec	1	8/27/2019 4:59:41 PM	46954
Surr: Phenol-d5	27.5	0	15-84.6		%Rec	1	8/27/2019 4:59:41 PM	46954
Surr: 2,4,6-Tribromophenol	52.1	0	27.8-112		%Rec	1	8/27/2019 4:59:41 PM	46954
Surr: Nitrobenzene-d5	55.8	0	33-113		%Rec	1	8/27/2019 4:59:41 PM	46954
Surr: 2-Fluorobiphenyl	54.7	0	26.6-107		%Rec	1	8/27/2019 4:59:41 PM	46954
Surr: 4-Terphenyl-d14	64.4	0	18.7-148		%Rec	1	8/27/2019 4:59:41 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	8700	83	500		µg/L	500	8/26/2019 4:07:29 PM	R62427
Toluene	67	18	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Ethylbenzene	1200	6.6	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Methyl tert-butyl ether (MTBE)	43	23	50	J	µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2,4-Trimethylbenzene	17	11	50	J	µg/L	50	8/23/2019 9:17:25 PM	R62400
1,3,5-Trimethylbenzene	17	9.4	50	J	µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2-Dichloroethane (EDC)	ND	9.7	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2-Dibromoethane (EDB)	ND	8.3	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Naphthalene	320	14	100		µg/L	50	8/23/2019 9:17:25 PM	R62400
1-Methylnaphthalene	90	16	200	J	µg/L	50	8/23/2019 9:17:25 PM	R62400
2-Methylnaphthalene	100	17	200	J	µg/L	50	8/23/2019 9:17:25 PM	R62400
Acetone	ND	60	500		µg/L	50	8/23/2019 9:17:25 PM	R62400
Bromobenzene	ND	12	50		µg/L	50	8/23/2019 9:17:25 PM	R62400

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-63
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:26:00 PM
Lab ID: 1908B82-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromodichloromethane	ND	6.7	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Bromoform	ND	14	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Bromomethane	ND	14	150		µg/L	50	8/23/2019 9:17:25 PM	R62400
2-Butanone	ND	100	500		µg/L	50	8/23/2019 9:17:25 PM	R62400
Carbon disulfide	ND	23	500		µg/L	50	8/23/2019 9:17:25 PM	R62400
Carbon Tetrachloride	ND	7.0	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Chlorobenzene	ND	9.7	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Chloroethane	ND	8.9	100		µg/L	50	8/23/2019 9:17:25 PM	R62400
Chloroform	ND	6.1	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Chloromethane	ND	16	150		µg/L	50	8/23/2019 9:17:25 PM	R62400
2-Chlorotoluene	ND	12	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
4-Chlorotoluene	ND	12	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
cis-1,2-DCE	ND	9.5	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
cis-1,3-Dichloropropene	ND	6.9	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2-Dibromo-3-chloropropane	ND	16	100		µg/L	50	8/23/2019 9:17:25 PM	R62400
Dibromochloromethane	ND	12	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Dibromomethane	ND	10	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2-Dichlorobenzene	ND	15	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,3-Dichlorobenzene	ND	12	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,4-Dichlorobenzene	ND	15	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Dichlorodifluoromethane	ND	13	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,1-Dichloroethane	ND	7.0	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,1-Dichloroethene	ND	10	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2-Dichloropropane	ND	10	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,3-Dichloropropane	ND	10	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
2,2-Dichloropropane	ND	12	100		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,1-Dichloropropene	ND	8.1	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Hexachlorobutadiene	ND	15	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
2-Hexanone	ND	77	500		µg/L	50	8/23/2019 9:17:25 PM	R62400
Isopropylbenzene	56	9.6	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
4-Isopropyltoluene	ND	11	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
4-Methyl-2-pentanone	ND	36	500		µg/L	50	8/23/2019 9:17:25 PM	R62400
Methylene Chloride	ND	7.7	150		µg/L	50	8/23/2019 9:17:25 PM	R62400
n-Butylbenzene	17	11	150	J	µg/L	50	8/23/2019 9:17:25 PM	R62400
n-Propylbenzene	170	11	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
sec-Butylbenzene	ND	12	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Styrene	ND	9.6	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
tert-Butylbenzene	ND	10	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,1,1,2-Tetrachloroethane	ND	10	50		µg/L	50	8/23/2019 9:17:25 PM	R62400

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: OW-63
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:26:00 PM
Lab ID: 1908B82-001
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1,2,2-Tetrachloroethane	ND	27	100		µg/L	50	8/23/2019 9:17:25 PM	R62400
Tetrachloroethene (PCE)	ND	7.5	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
trans-1,2-DCE	ND	9.0	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
trans-1,3-Dichloropropene	ND	8.3	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2,3-Trichlorobenzene	ND	15	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2,4-Trichlorobenzene	ND	9.8	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,1,1-Trichloroethane	ND	8.6	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,1,2-Trichloroethane	ND	11	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Trichloroethene (TCE)	ND	8.3	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Trichlorofluoromethane	ND	9.5	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
1,2,3-Trichloropropane	ND	15	100		µg/L	50	8/23/2019 9:17:25 PM	R62400
Vinyl chloride	ND	9.0	50		µg/L	50	8/23/2019 9:17:25 PM	R62400
Xylenes, Total	310	23	75		µg/L	50	8/23/2019 9:17:25 PM	R62400
Surr: 1,2-Dichloroethane-d4	94.5	0	70-130		%Rec	50	8/23/2019 9:17:25 PM	R62400
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	50	8/23/2019 9:17:25 PM	R62400
Surr: Dibromofluoromethane	91.5	0	70-130		%Rec	50	8/23/2019 9:17:25 PM	R62400
Surr: Toluene-d8	102	0	70-130		%Rec	50	8/23/2019 9:17:25 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	27	1.5	2.5		mg/L	50	8/23/2019 9:17:25 PM	G62400
Surr: BFB	98.2	0	70-130		%Rec	50	8/23/2019 9:17:25 PM	G62400

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-64
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:59:00 PM
Lab ID: 1908B82-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	0.59	0.35	1.0	J	mg/L	1	8/22/2019 9:11:18 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 9:11:18 PM	46957
Surr: DNOP	135	0	70-130	S	%Rec	1	8/22/2019 9:11:18 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	4.8	0.073	0.50	*	mg/L	5	8/21/2019 3:46:05 AM	A62276
Chloride	41	2.5	2.5		mg/L	5	8/21/2019 3:46:05 AM	A62276
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 3:46:05 AM	A62276
Bromide	1.6	0.089	0.50		mg/L	5	8/21/2019 3:46:05 AM	A62276
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/21/2019 3:46:05 AM	A62276
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 3:46:05 AM	A62276
Sulfate	25	0.33	2.5		mg/L	5	8/21/2019 3:46:05 AM	A62276
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.18	0.0025	0.020		mg/L	1	9/10/2019 4:09:20 PM	B62802
Barium	0.27	0.00065	0.0020		mg/L	1	9/10/2019 4:09:20 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 4:09:20 PM	B62802
Boron	2.2	0.023	0.20		mg/L	5	9/10/2019 4:11:25 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 4:09:20 PM	B62802
Calcium	12	0.062	1.0		mg/L	1	9/10/2019 4:09:20 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 4:09:20 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 4:09:20 PM	B62802
Copper	0.0033	0.0013	0.0060	J	mg/L	1	9/10/2019 4:09:20 PM	B62802
Iron	0.076	0.0087	0.020		mg/L	1	9/10/2019 4:09:20 PM	B62802
Magnesium	3.4	0.050	1.0		mg/L	1	9/10/2019 4:09:20 PM	B62802
Manganese	0.35	0.00029	0.0020	*	mg/L	1	9/10/2019 4:09:20 PM	B62802
Molybdenum	0.022	0.0067	0.0080		mg/L	1	9/10/2019 4:09:20 PM	B62802
Nickel	0.0057	0.0040	0.010	J	mg/L	1	9/10/2019 4:09:20 PM	B62802
Potassium	1.2	0.16	1.0		mg/L	1	9/10/2019 4:09:20 PM	B62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 4:09:20 PM	B62802
Sodium	480	4.2	10		mg/L	10	9/14/2019 10:20:33 AM	A62943
Zinc	0.0073	0.0023	0.010	J	mg/L	1	9/10/2019 4:09:20 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	8.3	0.025	0.20	*	mg/L	10	8/30/2019 6:55:53 PM	47174
Barium	0.37	0.00065	0.0020		mg/L	1	8/30/2019 4:57:49 PM	47174
Beryllium	ND	0.00028	0.0020		mg/L	1	8/30/2019 4:57:49 PM	47174
Boron	2.1	0.045	0.40		mg/L	10	8/30/2019 6:55:53 PM	47174
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 4:57:49 PM	47174
Chromium	0.012	0.0015	0.0060		mg/L	1	8/30/2019 4:57:49 PM	47174
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 4:57:49 PM	47174

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Client Sample ID: OW-64
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:59:00 PM
Lab ID: 1908B82-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 4:57:49 PM	47174
Iron	3.1	0.087	0.20	*	mg/L	10	8/30/2019 6:55:53 PM	47174
Manganese	0.47	0.00029	0.0020	*	mg/L	1	8/30/2019 4:57:49 PM	47174
Molybdenum	0.023	0.0067	0.0080		mg/L	1	8/30/2019 4:57:49 PM	47174
Nickel	0.011	0.0040	0.010		mg/L	1	8/30/2019 4:57:49 PM	47174
Silver	ND	0.0014	0.0050		mg/L	1	8/30/2019 4:57:49 PM	47174
Zinc	0.0090	0.0058	0.010	J	mg/L	1	8/30/2019 4:57:49 PM	47174
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 2:34:46 PM	A62654
Arsenic	0.0037	0.00010	0.0010		mg/L	1	9/4/2019 2:34:46 PM	A62654
Lead	0.000082	0.000055	0.00050	J	mg/L	1	9/4/2019 2:34:46 PM	A62654
Selenium	0.00036	0.00017	0.0010	J	mg/L	1	9/4/2019 2:34:46 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:34:46 PM	A62654
Uranium	0.012	0.000075	0.00050		mg/L	1	9/4/2019 2:34:46 PM	A62654
EPA 200.8: METALS							Analyst: **JLF**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/3/2019 5:09:19 PM	47174
Arsenic	0.0046	0.00031	0.0010		mg/L	1	9/3/2019 5:09:19 PM	47174
Lead	0.0029	0.000055	0.00050		mg/L	1	9/3/2019 5:09:19 PM	47174
Selenium	0.00053	0.00048	0.0010	J	mg/L	1	9/3/2019 5:09:19 PM	47174
Thallium	0.000068	0.000052	0.00050	J	mg/L	1	9/3/2019 5:09:19 PM	47174
Uranium	0.013	0.000085	0.00050		mg/L	1	9/3/2019 5:09:19 PM	47174
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:24:18 PM	47321
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Aniline	ND	3.6	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 5:29:57 PM	46954
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 5:29:57 PM	46954

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J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-64
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:59:00 PM
Lab ID: 1908B82-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 5:29:57 PM	46954
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 5:29:57 PM	46954
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 5:29:57 PM	46954
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 5:29:57 PM	46954
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 5:29:57 PM	46954
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 5:29:57 PM	46954
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 5:29:57 PM	46954
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 5:29:57 PM	46954
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 5:29:57 PM	46954
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 5:29:57 PM	46954

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-64
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:59:00 PM
Lab ID: 1908B82-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 5:29:57 PM	46954
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 5:29:57 PM	46954
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Naphthalene	4.3	4.1	10	J	µg/L	1	8/27/2019 5:29:57 PM	46954
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 5:29:57 PM	46954
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 5:29:57 PM	46954
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 5:29:57 PM	46954
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Phenol	ND	8.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 5:29:57 PM	46954
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 5:29:57 PM	46954
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 5:29:57 PM	46954
Surr: 2-Fluorophenol	35.5	0	15-101		%Rec	1	8/27/2019 5:29:57 PM	46954
Surr: Phenol-d5	26.9	0	15-84.6		%Rec	1	8/27/2019 5:29:57 PM	46954
Surr: 2,4,6-Tribromophenol	50.1	0	27.8-112		%Rec	1	8/27/2019 5:29:57 PM	46954
Surr: Nitrobenzene-d5	54.7	0	33-113		%Rec	1	8/27/2019 5:29:57 PM	46954
Surr: 2-Fluorobiphenyl	48.6	0	26.6-107		%Rec	1	8/27/2019 5:29:57 PM	46954
Surr: 4-Terphenyl-d14	50.3	0	18.7-148		%Rec	1	8/27/2019 5:29:57 PM	46954
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	63	1.7	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Toluene	11	3.5	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Ethylbenzene	110	1.3	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Methyl tert-butyl ether (MTBE)	ND	4.6	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2,4-Trimethylbenzene	110	2.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,3,5-Trimethylbenzene	6.6	1.9	10	J	µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2-Dibromoethane (EDB)	ND	1.7	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Naphthalene	9.1	2.8	20	J	µg/L	10	8/23/2019 9:46:04 PM	R62400
1-Methylnaphthalene	4.7	3.1	40	J	µg/L	10	8/23/2019 9:46:04 PM	R62400
2-Methylnaphthalene	ND	3.5	40		µg/L	10	8/23/2019 9:46:04 PM	R62400
Acetone	14	12	100	J	µg/L	10	8/23/2019 9:46:04 PM	R62400
Bromobenzene	ND	2.4	10		µg/L	10	8/23/2019 9:46:04 PM	R62400

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-64
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:59:00 PM
Lab ID: 1908B82-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Bromodichloromethane	ND	1.3	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Bromoform	ND	2.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Bromomethane	ND	2.7	30		µg/L	10	8/23/2019 9:46:04 PM	R62400
2-Butanone	ND	21	100		µg/L	10	8/23/2019 9:46:04 PM	R62400
Carbon disulfide	ND	4.5	100		µg/L	10	8/23/2019 9:46:04 PM	R62400
Carbon Tetrachloride	ND	1.4	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Chlorobenzene	ND	1.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Chloroethane	ND	1.8	20		µg/L	10	8/23/2019 9:46:04 PM	R62400
Chloroform	ND	1.2	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Chloromethane	ND	3.2	30		µg/L	10	8/23/2019 9:46:04 PM	R62400
2-Chlorotoluene	ND	2.5	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
4-Chlorotoluene	ND	2.3	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
cis-1,2-DCE	ND	1.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
cis-1,3-Dichloropropene	ND	1.4	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2-Dibromo-3-chloropropane	ND	3.3	20		µg/L	10	8/23/2019 9:46:04 PM	R62400
Dibromochloromethane	ND	2.4	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Dibromomethane	ND	2.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2-Dichlorobenzene	ND	3.0	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,3-Dichlorobenzene	ND	2.5	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,1-Dichloroethane	ND	1.4	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,1-Dichloroethene	ND	2.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2-Dichloropropane	ND	2.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,3-Dichloropropane	ND	2.0	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
2,2-Dichloropropane	ND	2.3	20		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Hexachlorobutadiene	ND	3.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
2-Hexanone	ND	15	100		µg/L	10	8/23/2019 9:46:04 PM	R62400
Isopropylbenzene	47	1.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
4-Isopropyltoluene	6.6	2.2	10	J	µg/L	10	8/23/2019 9:46:04 PM	R62400
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	8/23/2019 9:46:04 PM	R62400
Methylene Chloride	ND	1.5	30		µg/L	10	8/23/2019 9:46:04 PM	R62400
n-Butylbenzene	ND	2.3	30		µg/L	10	8/23/2019 9:46:04 PM	R62400
n-Propylbenzene	37	2.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
sec-Butylbenzene	14	2.5	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Styrene	ND	1.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
tert-Butylbenzene	ND	2.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,1,1,2-Tetrachloroethane	ND	2.1	10		µg/L	10	8/23/2019 9:46:04 PM	R62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-64
Project: 2019 Annual GW
Collection Date: 8/19/2019 3:59:00 PM
Lab ID: 1908B82-002
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,1,2,2-Tetrachloroethane	ND	5.5	20		µg/L	10	8/23/2019 9:46:04 PM	R62400
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
trans-1,3-Dichloropropene	ND	1.7	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2,3-Trichlorobenzene	ND	3.0	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2,4-Trichlorobenzene	ND	2.0	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,1,1-Trichloroethane	ND	1.7	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,1,2-Trichloroethane	ND	2.2	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Trichloroethene (TCE)	ND	1.7	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Trichlorofluoromethane	ND	1.9	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
1,2,3-Trichloropropane	ND	3.0	20		µg/L	10	8/23/2019 9:46:04 PM	R62400
Vinyl chloride	ND	1.8	10		µg/L	10	8/23/2019 9:46:04 PM	R62400
Xylenes, Total	170	4.5	15		µg/L	10	8/23/2019 9:46:04 PM	R62400
Surr: 1,2-Dichloroethane-d4	96.2	0	70-130		%Rec	10	8/23/2019 9:46:04 PM	R62400
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	10	8/23/2019 9:46:04 PM	R62400
Surr: Dibromofluoromethane	93.0	0	70-130		%Rec	10	8/23/2019 9:46:04 PM	R62400
Surr: Toluene-d8	102	0	70-130		%Rec	10	8/23/2019 9:46:04 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	2.5	0.31	0.50		mg/L	10	8/23/2019 9:46:04 PM	G62400
Surr: BFB	101	0	70-130		%Rec	10	8/23/2019 9:46:04 PM	G62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-11
Project: 2019 Annual GW
Collection Date: 8/20/2019 11:05:00 AM
Lab ID: 1908B82-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/22/2019 9:33:42 PM	46957
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2019 9:33:42 PM	46957
Surr: DNOP	142	0	70-130	S	%Rec	1	8/22/2019 9:33:42 PM	46957
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.0	0.073	0.50		mg/L	5	8/21/2019 4:11:47 AM	A62276
Chloride	98	10	10		mg/L	20	8/21/2019 4:24:39 AM	A62276
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 4:11:47 AM	A62276
Bromide	0.34	0.089	0.50	J	mg/L	5	8/21/2019 4:11:47 AM	A62276
Nitrogen, Nitrate (As N)	1.6	0.025	0.50		mg/L	5	8/21/2019 4:11:47 AM	A62276
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 4:11:47 AM	A62276
Sulfate	940	1.3	10		mg/L	20	8/21/2019 4:24:39 AM	A62276
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.0073	0.0025	0.020	J	mg/L	1	9/10/2019 4:13:24 PM	B62802
Barium	0.0068	0.00065	0.0020		mg/L	1	9/10/2019 4:13:24 PM	B62802
Beryllium	ND	0.00028	0.0020		mg/L	1	9/10/2019 4:13:24 PM	B62802
Boron	1.3	0.023	0.20		mg/L	5	9/10/2019 4:15:29 PM	B62802
Cadmium	ND	0.00055	0.0020		mg/L	1	9/10/2019 4:13:24 PM	B62802
Calcium	10	0.062	1.0		mg/L	1	9/10/2019 4:13:24 PM	B62802
Chromium	ND	0.0015	0.0060		mg/L	1	9/10/2019 4:13:24 PM	B62802
Cobalt	ND	0.0031	0.0060		mg/L	1	9/10/2019 4:13:24 PM	B62802
Copper	0.0040	0.0013	0.0060	J	mg/L	1	9/10/2019 4:13:24 PM	B62802
Iron	ND	0.0087	0.020		mg/L	1	9/10/2019 4:13:24 PM	B62802
Magnesium	1.2	0.050	1.0		mg/L	1	9/10/2019 4:13:24 PM	B62802
Manganese	0.017	0.00029	0.0020		mg/L	1	9/10/2019 4:13:24 PM	B62802
Molybdenum	0.17	0.0067	0.0080		mg/L	1	9/10/2019 4:13:24 PM	B62802
Nickel	ND	0.0040	0.010		mg/L	1	9/10/2019 4:13:24 PM	B62802
Potassium	1.6	0.16	1.0		mg/L	1	9/10/2019 4:13:24 PM	B62802
Silver	ND	0.00094	0.0050		mg/L	1	9/10/2019 4:13:24 PM	B62802
Sodium	600	4.2	10		mg/L	10	9/14/2019 10:28:56 AM	A62943
Zinc	0.0039	0.0023	0.010	J	mg/L	1	9/10/2019 4:13:24 PM	B62802
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.0045	0.0025	0.020	J	mg/L	1	8/30/2019 3:03:29 PM	A62563
Barium	0.0073	0.00065	0.0020		mg/L	1	8/30/2019 3:03:29 PM	A62563
Beryllium	ND	0.00028	0.0020		mg/L	1	8/30/2019 3:03:29 PM	A62563
Boron	1.3	0.023	0.20		mg/L	5	8/30/2019 3:05:32 PM	A62563
Cadmium	ND	0.00074	0.0020		mg/L	1	8/30/2019 3:03:29 PM	A62563
Chromium	ND	0.0015	0.0060		mg/L	1	8/30/2019 3:03:29 PM	A62563
Cobalt	ND	0.0031	0.0060		mg/L	1	8/30/2019 3:03:29 PM	A62563

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-11
Project: 2019 Annual GW
Collection Date: 8/20/2019 11:05:00 AM
Lab ID: 1908B82-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	8/30/2019 3:03:29 PM	A62563
Iron	ND	0.0087	0.020		mg/L	1	8/30/2019 3:03:29 PM	A62563
Manganese	0.018	0.00029	0.0020		mg/L	1	8/30/2019 3:03:29 PM	A62563
Molybdenum	0.18	0.0067	0.0080		mg/L	1	8/30/2019 3:03:29 PM	A62563
Nickel	ND	0.0040	0.010		mg/L	1	8/30/2019 3:03:29 PM	A62563
Silver	ND	0.0014	0.0050		mg/L	1	8/30/2019 3:03:29 PM	A62563
Zinc	ND	0.0058	0.010		mg/L	1	8/30/2019 3:03:29 PM	A62563
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 2:37:28 PM	A62654
Arsenic	0.0019	0.00010	0.0010		mg/L	1	9/4/2019 2:37:28 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:37:28 PM	A62654
Selenium	0.0047	0.00017	0.0010		mg/L	1	9/4/2019 2:37:28 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:37:28 PM	A62654
Uranium	0.20	0.00075	0.0050	*	mg/L	10	9/4/2019 3:09:51 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 4:38:27 PM	B62654
Arsenic	0.0020	0.00031	0.0010		mg/L	1	8/30/2019 3:54:52 PM	B62562
Lead	ND	0.000055	0.00050		mg/L	1	8/30/2019 3:54:52 PM	B62562
Selenium	0.0044	0.00048	0.0010		mg/L	1	9/4/2019 4:38:27 PM	B62654
Thallium	ND	0.000052	0.00050		mg/L	1	8/30/2019 3:54:52 PM	B62562
Uranium	0.19	0.00085	0.0050	*	mg/L	10	9/4/2019 4:41:10 PM	B62654
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/6/2019 4:26:30 PM	47321
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	0.48	0.17	1.0	J	µg/L	1	8/23/2019 10:14:52 PM	R62400
Toluene	ND	0.35	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Ethylbenzene	0.41	0.13	1.0	J	µg/L	1	8/23/2019 10:14:52 PM	R62400
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2,4-Trimethylbenzene	0.31	0.21	1.0	J	µg/L	1	8/23/2019 10:14:52 PM	R62400
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2-Dichloroethane (EDC)	0.38	0.19	1.0	J	µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Naphthalene	ND	0.28	2.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Acetone	ND	1.2	10		µg/L	1	8/23/2019 10:14:52 PM	R62400
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400

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Qualifiers:

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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-11
Project: 2019 Annual GW
Collection Date: 8/20/2019 11:05:00 AM
Lab ID: 1908B82-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 10:14:52 PM	R62400
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 10:14:52 PM	R62400
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Chloroform	ND	0.12	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 10:14:52 PM	R62400
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 10:14:52 PM	R62400
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Styrene	ND	0.19	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Gallup
Client Sample ID: OW-11
Project: 2019 Annual GW
Collection Date: 8/20/2019 11:05:00 AM
Lab ID: 1908B82-003
Matrix: AQUEOUS
Received Date: 8/20/2019 4:03:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 10:14:52 PM	R62400
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/23/2019 10:14:52 PM	R62400
Surr: 1,2-Dichloroethane-d4	95.4	0	70-130		%Rec	1	8/23/2019 10:14:52 PM	R62400
Surr: 4-Bromofluorobenzene	95.7	0	70-130		%Rec	1	8/23/2019 10:14:52 PM	R62400
Surr: Dibromofluoromethane	96.7	0	70-130		%Rec	1	8/23/2019 10:14:52 PM	R62400
Surr: Toluene-d8	98.6	0	70-130		%Rec	1	8/23/2019 10:14:52 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	8/23/2019 10:14:52 PM	G62400
Surr: BFB	95.5	0	70-130		%Rec	1	8/23/2019 10:14:52 PM	G62400

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128811** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	107	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0021	0.0020	0.002000	0	103	50	150			
Boron	0.039	0.040	0.04000	0	97.7	50	150			J
Cadmium	0.0025	0.0020	0.002000	0	126	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.0	50	150			J
Cobalt	0.0052	0.0060	0.006000	0	86.0	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.5	50	150			J
Molybdenum	0.0091	0.0080	0.008000	0	114	50	150			
Nickel	0.0035	0.010	0.005000	0	70.3	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.9	50	150			J
Zinc	0.011	0.010	0.01000	0	108	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2128813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.6	85	115			
Barium	0.48	0.0020	0.5000	0	96.2	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.1	85	115			
Boron	0.50	0.040	0.5000	0	99.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.1	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.7	85	115			
Nickel	0.48	0.010	0.5000	0	95.4	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.49	0.010	0.5000	0	97.6	85	115			

Sample ID: **MB-47174**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **47174**	RunNo: **62563**
Prep Date: **8/29/2019**	Analysis Date: **8/30/2019**	SeqNo: **2128826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-47174**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47174**	RunNo: **62563**
Prep Date: **8/29/2019**	Analysis Date: **8/30/2019**	SeqNo: **2128827** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **LLLCS-47174**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47174**	RunNo: **62563**
Prep Date: **8/29/2019**	Analysis Date: **8/30/2019**	SeqNo: **2128827** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	117	50	150			J
Barium	0.0018	0.0020	0.002000	0	91.4	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	107	50	150			
Boron	0.042	0.040	0.04000	0	105	50	150			
Cadmium	0.0024	0.0020	0.002000	0	122	50	150			
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Cobalt	0.0051	0.0060	0.006000	0	84.8	50	150			J
Copper	0.0065	0.0060	0.006000	0	108	50	150			
Iron	0.023	0.020	0.02000	0	117	50	150			
Manganese	0.0023	0.0020	0.002000	0	113	50	150			
Molybdenum	0.0082	0.0080	0.008000	0	102	50	150			
Nickel	0.0057	0.010	0.005000	0	114	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.2	50	150			J
Zinc	0.013	0.010	0.01000	0	132	50	150			

Sample ID: **LCS-47174**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47174**	RunNo: **62563**
Prep Date: **8/29/2019**	Analysis Date: **8/30/2019**	SeqNo: **2128828** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.5	85	115			
Barium	0.48	0.0020	0.5000	0	95.1	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.2	85	115			
Boron	0.49	0.040	0.5000	0	97.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.5	85	115			
Chromium	0.48	0.0060	0.5000	0	96.5	85	115			
Cobalt	0.47	0.0060	0.5000	0	95.0	85	115			
Copper	0.48	0.0060	0.5000	0	96.3	85	115			
Iron	0.48	0.020	0.5000	0	95.2	85	115			
Manganese	0.48	0.0020	0.5000	0	96.8	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.6	85	115			
Nickel	0.47	0.010	0.5000	0	94.2	85	115			
Silver	0.098	0.0050	0.1000	0	97.6	85	115			
Zinc	0.49	0.010	0.5000	0	97.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129968** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129969** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	107	50	150			J
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Beryllium	0.0021	0.0020	0.002000	0	103	50	150			
Boron	0.039	0.040	0.04000	0	97.7	50	150			J
Cadmium	0.0025	0.0020	0.002000	0	126	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.0	50	150			J
Cobalt	0.0052	0.0060	0.006000	0	86.0	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.5	50	150			J
Molybdenum	0.0091	0.0080	0.008000	0	114	50	150			
Nickel	0.0035	0.010	0.005000	0	70.3	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.9	50	150			J
Zinc	0.011	0.010	0.01000	0	108	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62563**	RunNo: **62563**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.50	0.020	0.5000	0	99.6	85	115			
Barium	0.48	0.0020	0.5000	0	96.2	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.1	85	115			
Boron	0.50	0.040	0.5000	0	99.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.7	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.1	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.7	85	115			
Nickel	0.48	0.010	0.5000	0	95.4	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.49	0.010	0.5000	0	97.6	85	115			

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0094	0.020	0.01000	0	93.6	50	150			J
Barium	0.0019	0.0020	0.002000	0	96.2	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	96.6	50	150			J
Boron	0.040	0.040	0.04000	0	99.7	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	105	50	150			
Calcium	0.54	1.0	0.5000	0	107	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Cobalt	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0065	0.0060	0.006000	0	109	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.53	1.0	0.5000	0	106	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0094	0.0080	0.008000	0	117	50	150			
Nickel	0.0048	0.010	0.005000	0	96.8	50	150			J
Potassium	0.48	1.0	0.5000	0	96.4	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.6	50	150			J
Sodium	0.52	1.0	0.5000	0	105	50	150			J
Zinc	0.011	0.010	0.01000	0	106	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139482** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	107	85	115			
Barium	0.48	0.0020	0.5000	0	95.1	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.3	85	115			
Cobalt	0.48	0.0060	0.5000	0	96.5	85	115			
Copper	0.49	0.0060	0.5000	0	97.7	85	115			
Iron	0.49	0.020	0.5000	0	98.0	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.4	85	115			
Nickel	0.48	0.010	0.5000	0	95.8	85	115			
Potassium	49	1.0	50.00	0	98.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62802**	RunNo: **62802**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2139482** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.3	85	115			
Sodium	50	1.0	50.00	0	99.4	85	115			
Zinc	0.49	0.010	0.5000	0	98.4	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145666** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Sodium	ND	1.0								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145667** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.020	0.020	0.02000	0	101	50	150			
Sodium	0.59	1.0	0.5000	0	119	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Sodium	50	1.0	50.00	0	99.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **B62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129994** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Thallium	0.00049	0.00050	0.0005000	0	97.7	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **B62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Thallium	0.012	0.00050	0.01250	0	97.1	85	115			

Sample ID: **MB-47174**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **47174**	RunNo: **62606**
Prep Date: **8/29/2019**	Analysis Date: **9/3/2019**	SeqNo: **2130580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-47174**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **47174**	RunNo: **62606**
Prep Date: **8/29/2019**	Analysis Date: **9/3/2019**	SeqNo: **2130581** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00056	0.0010	0.001000	0	55.9	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.0012	0.0010	0.001000	0	124	50	150			
Thallium	0.00044	0.00050	0.0005000	0	87.8	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	101	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **MSLCS-47174**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **47174**	RunNo: **62606**
Prep Date: **8/29/2019**	Analysis Date: **9/3/2019**	SeqNo: **2130582** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	105	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.8	85	115			
Lead	0.012	0.00050	0.01250	0	99.6	85	115			
Selenium	0.024	0.0010	0.02500	0	95.1	85	115			
Thallium	0.012	0.00050	0.01250	0	99.1	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **B62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00053	0.0010								J
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **B62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133279** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	108	50	150			
Selenium	0.00097	0.0010	0.001000	0	96.9	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.7	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **B62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.2	85	115			
Uranium	0.012	0.00050	0.01250	0	94.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62562**	RunNo: **62562**
Prep Date:	Analysis Date: **8/30/2019**	SeqNo: **2129993** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Thallium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	101	50	150			
Arsenic	0.00096	0.0010	0.001000	0	96.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.5	50	150			J
Selenium	0.00086	0.0010	0.001000	0	85.7	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	94.7	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133217** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.8	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.7	85	115			
Selenium	0.022	0.0010	0.02500	0	89.8	85	115			
Thallium	0.012	0.00050	0.01250	0	96.0	85	115			
Uranium	0.012	0.00050	0.01250	0	95.7	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133275** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **MB-47321**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **47321**	RunNo: **62727**
Prep Date: **9/6/2019**	Analysis Date: **9/6/2019**	SeqNo: **2136134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-47321**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **47321**	RunNo: **62727**
Prep Date: **9/6/2019**	Analysis Date: **9/6/2019**	SeqNo: **2136135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A62276**	RunNo: **62276**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116649** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A62276**	RunNo: **62276**
Prep Date:	Analysis Date: **8/20/2019**	SeqNo: **2116650** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.7	0.50	5.000	0	93.4	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.6	90	110			
Bromide	2.4	0.10	2.500	0	95.3	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.0	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.7	90	110			
Sulfate	9.4	0.50	10.00	0	94.3	90	110			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **LCS-46957**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **46957**	RunNo: **62322**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	114	71.8	135			
Surr: DNOP	0.56		0.5000		111	70	130			

Sample ID: **MB-46957**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **46957**	RunNo: **62322**
Prep Date: **8/21/2019**	Analysis Date: **8/22/2019**	SeqNo: **2119387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		123	70	130			

Sample ID: **MB-47020**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **47020**	RunNo: **62411**
Prep Date: **8/23/2019**	Analysis Date: **8/26/2019**	SeqNo: **2122349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.86		1.000		85.7	70	130			

Sample ID: **LCS-47020**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **47020**	RunNo: **62439**
Prep Date: **8/23/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	111	71.8	135			
Surr: DNOP	0.57		0.5000		114	70	130			

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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S	% Recovery outside of range due to dilution or matrix
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121087** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Chlorobenzene	22	1.0	20.00	0	108	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.6	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	0.22	1.0								J
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	0.38	1.0								J
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	1.3	3.0								J
2-Chlorotoluene	ND	1.0								

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.24	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.7	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62427**	RunNo: **62427**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122329** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	9.8		10.00		98.5	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62427**	RunNo: **62427**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122372** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **lcs-46954**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123966** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	98	10	100.0	0	97.5	32.2	94			S
4-Chloro-3-methylphenol	180	10	200.0	0	91.7	37.7	101			
2-Chlorophenol	190	10	200.0	0	93.6	32.6	90.1			S
1,4-Dichlorobenzene	74	10	100.0	0	73.5	30	87.2			
2,4-Dinitrotoluene	82	10	100.0	0	81.7	35.9	85.8			
N-Nitrosodi-n-propylamine	93	10	100.0	0	93.2	37.1	108			
4-Nitrophenol	100	10	200.0	0	49.8	22.4	86.6			
Pentachlorophenol	150	20	200.0	0	77.3	31.6	91			
Phenol	120	10	200.0	0	61.9	21.7	84.9			
Pyrene	84	10	100.0	0	83.8	46.3	103			
1,2,4-Trichlorobenzene	77	10	100.0	0	77.4	30.2	88.3			
Surr: 2-Fluorophenol	110		200.0		56.8	15	101			
Surr: Phenol-d5	97		200.0		48.4	15	84.6			
Surr: 2,4,6-Tribromophenol	160		200.0		78.2	27.8	112			
Surr: Nitrobenzene-d5	87		100.0		87.2	33	113			
Surr: 2-Fluorobiphenyl	77		100.0		77.0	26.6	107			
Surr: 4-Terphenyl-d14	79		100.0		79.0	18.7	148			

Sample ID: **lcsd-46954**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123968** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	91	10	100.0	0	90.5	32.2	94	7.44	32.9	
4-Chloro-3-methylphenol	190	10	200.0	0	95.3	37.7	101	3.87	29.9	
2-Chlorophenol	160	10	200.0	0	80.6	32.6	90.1	15.0	28.5	
1,4-Dichlorobenzene	72	10	100.0	0	72.1	15	87.2	1.98	44.9	
2,4-Dinitrotoluene	82	10	100.0	0	81.7	35.9	85.8	0.0245	28.5	
N-Nitrosodi-n-propylamine	94	10	100.0	0	93.8	37.1	108	0.641	29.9	
4-Nitrophenol	20	10	200.0	0	10.0	15	86.6	133	68	RS
Pentachlorophenol	49	20	200.0	0	24.4	31.6	91	104	39.5	RS
Phenol	120	10	200.0	0	59.5	15	84.9	3.99	44.2	
Pyrene	94	10	100.0	0	93.5	46.3	103	11.0	23.8	
1,2,4-Trichlorobenzene	80	10	100.0	0	79.6	15.7	88.3	2.80	38	
Surr: 2-Fluorophenol	75		200.0		37.7	15	101	0	0	
Surr: Phenol-d5	95		200.0		47.4	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	100		200.0		52.2	27.8	112	0	0	
Surr: Nitrobenzene-d5	90		100.0		89.9	33	113	0	0	
Surr: 2-Fluorobiphenyl	75		100.0		75.1	26.6	107	0	0	

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **lcsd-46954**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123968** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	89		100.0		89.1	18.7	148	0	0	

Sample ID: **mb-46954**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**
18-Sep-19

Client: Western Refining Gallup
Project: 2019 Annual GW

Sample ID: **mb-46954**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3′-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **mb-46954**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **46954**	RunNo: **62456**
Prep Date: **8/21/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	66		200.0		33.0	15	101			
Surr: Phenol-d5	50		200.0		25.2	15	84.6			
Surr: 2,4,6-Tribromophenol	83		200.0		41.4	27.8	112			
Surr: Nitrobenzene-d5	45		100.0		45.3	33	113			
Surr: 2-Fluorobiphenyl	40		100.0		40.3	26.6	107			
Surr: 4-Terphenyl-d14	50		100.0		50.3	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908B82**

18-Sep-19

Client: Western Refining Gallup

Project: 2019 Annual GW

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121104** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	96.1	70	130			
Surr: BFB	9.9		10.00		99.4	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121105** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1908B82** RcptNo: 1

Received By: **Desiree Dominguez** **8/20/2019 4:03:00 PM** DD

Completed By: **Leah Baca** **8/20/2019 5:27:42 PM** Leah Baca

Reviewed By: upreserves 8/20/19 @ 1735 / LB 8/21/19
taken back LB

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 9 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DAD 8/21/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	Good	Yes			
2	1.9	Good	Yes			
3	2.7	Good	Yes			

Chain-of-Custody Record

Client: Western

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: 2019 Annual GW

Project #: OW-63,64

Project Manager: Brian Moore

Sampler: C. Johnson

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.1-0.2=1.9°, 2.9-0.2=2.7°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1908B82	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC Metals	Total + Dissolved	Cations		Air Bubbles (Y or N)
8/19/19	1526	Aqueous	OW-63	Misc	Misc	-001			X			X		X		X	X	X	X	X		
8/19/19	1559		OW-64	Misc	Misc	-002			X		X	X		X		X		X	X	X		
8/20/19	1105		OW-11	Misc	Misc	-003			X			X		X		X		X	X	X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/20/19	1355			8/20/19	1400
8/20/19	1603		CDO	8/20/19	16:03

Remarks: 8260B, 8270, WQCC Metals - Total + Dissolved, Cations/Anions

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 26, 2019

Brian Moore

Andeavor, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 722-0210

RE: 2019 Annual GW Sampling OrderNo.: 1908C74

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/21/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1908C74**
Date: **9/26/2019**

CLIENT: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Analytical Notes Regarding EPA Method 8011/504.1:
A trip blank was not provided for this method.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-38
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 3:12:00 PM
Lab ID: 1908C74-001 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/26/2019 3:47:08 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 3:47:08 PM	47020
Surr: DNOP	93.6	0	70-130		%Rec	1	8/26/2019 3:47:08 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.93	0.073	0.50		mg/L	5	8/21/2019 11:58:00 PM	A62337
Chloride	360	10	10		mg/L	20	8/22/2019 12:36:36 AM	A62337
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/21/2019 11:58:00 PM	A62337
Bromide	0.52	0.089	0.50		mg/L	5	8/21/2019 11:58:00 PM	A62337
Nitrogen, Nitrate (As N)	5.5	0.025	0.50		mg/L	5	8/21/2019 11:58:00 PM	A62337
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/21/2019 11:58:00 PM	A62337
Sulfate	560	1.3	10		mg/L	20	8/22/2019 12:36:36 AM	A62337
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 11:07:27 AM	B62943
Barium	0.027	0.00065	0.0020		mg/L	1	9/14/2019 11:07:27 AM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 11:07:27 AM	B62943
Boron	0.53	0.023	0.20		mg/L	5	9/16/2019 2:14:28 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 11:07:27 AM	B62943
Calcium	180	0.31	5.0		mg/L	5	9/16/2019 2:14:28 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 11:07:27 AM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 11:07:27 AM	B62943
Copper	0.0048	0.0013	0.0060	J	mg/L	1	9/14/2019 11:07:27 AM	B62943
Iron	ND	0.0087	0.020		mg/L	1	9/14/2019 11:07:27 AM	B62943
Magnesium	32	0.050	1.0		mg/L	1	9/14/2019 11:07:27 AM	B62943
Manganese	2.4	0.0014	0.010	*	mg/L	5	9/16/2019 2:14:28 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 11:07:27 AM	B62943
Nickel	0.0076	0.0040	0.010	J	mg/L	1	9/14/2019 11:07:27 AM	B62943
Potassium	0.45	0.16	1.0	J	mg/L	1	9/14/2019 11:07:27 AM	B62943
Silver	0.0028	0.00094	0.0050	J	mg/L	1	9/14/2019 11:07:27 AM	B62943
Sodium	350	2.1	5.0		mg/L	5	9/16/2019 2:14:28 PM	A62967
Zinc	0.0044	0.0023	0.010	J	mg/L	1	9/14/2019 11:07:27 AM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.0	0.012	0.10	*	mg/L	5	9/4/2019 7:17:15 PM	47250
Barium	0.069	0.00065	0.0020		mg/L	1	9/4/2019 7:15:15 PM	47250
Beryllium	ND	0.00028	0.0020		mg/L	1	9/4/2019 7:15:15 PM	47250
Boron	0.54	0.0045	0.040		mg/L	1	9/12/2019 9:07:17 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 7:15:15 PM	47250
Chromium	ND	0.0015	0.0060		mg/L	1	9/4/2019 7:15:15 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/4/2019 7:15:15 PM	47250

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-38
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 3:12:00 PM
Lab ID: 1908C74-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Copper	ND	0.0041	0.0060		mg/L	1	9/4/2019 7:15:15 PM	47250
Iron	0.83	0.0087	0.020	*	mg/L	1	9/4/2019 7:15:15 PM	47250
Manganese	2.6	0.0014	0.010	*	mg/L	5	9/4/2019 7:17:15 PM	47250
Molybdenum	0.0068	0.0067	0.0080	J	mg/L	1	9/4/2019 7:15:15 PM	47250
Nickel	0.0059	0.0040	0.010	J	mg/L	1	9/4/2019 7:15:15 PM	47250
Silver	0.0028	0.0014	0.0050	J	mg/L	1	9/4/2019 7:15:15 PM	47250
Zinc	ND	0.0058	0.010		mg/L	1	9/4/2019 7:15:15 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 2:56:22 PM	A62654
Arsenic	0.00044	0.00010	0.0010	J	mg/L	1	9/4/2019 2:56:22 PM	A62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 2:56:22 PM	A62654
Selenium	0.0029	0.00017	0.0010		mg/L	1	9/4/2019 2:56:22 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 2:56:22 PM	A62654
Uranium	0.022	0.000075	0.00050		mg/L	1	9/4/2019 2:56:22 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 3:53:47 PM	47250
Arsenic	0.00068	0.00031	0.0010	J	mg/L	1	9/5/2019 3:53:47 PM	47250
Lead	0.00083	0.000055	0.00050		mg/L	1	9/5/2019 3:53:47 PM	47250
Selenium	0.0028	0.00048	0.0010		mg/L	1	9/5/2019 3:53:47 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 3:53:47 PM	47250
Uranium	0.020	0.00042	0.0025		mg/L	5	9/5/2019 5:36:20 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 4:53:56 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 7:31:28 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 7:31:28 PM	47000

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-38
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 3:12:00 PM
Lab ID: 1908C74-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 7:31:28 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 7:31:28 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 7:31:28 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 7:31:28 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 7:31:28 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 7:31:28 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 7:31:28 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 7:31:28 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 7:31:28 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 7:31:28 PM	47000

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Qualifiers:

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-38
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 3:12:00 PM
Lab ID: 1908C74-001 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 7:31:28 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 7:31:28 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 7:31:28 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 7:31:28 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 7:31:28 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 7:31:28 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 7:31:28 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 7:31:28 PM	47000
Surr: 2-Fluorophenol	34.6	0	15-101		%Rec	1	8/27/2019 7:31:28 PM	47000
Surr: Phenol-d5	35.7	0	15-84.6		%Rec	1	8/27/2019 7:31:28 PM	47000
Surr: 2,4,6-Tribromophenol	41.9	0	27.8-112		%Rec	1	8/27/2019 7:31:28 PM	47000
Surr: Nitrobenzene-d5	75.7	0	33-113		%Rec	1	8/27/2019 7:31:28 PM	47000
Surr: 2-Fluorobiphenyl	63.5	0	26.6-107		%Rec	1	8/27/2019 7:31:28 PM	47000
Surr: 4-Terphenyl-d14	61.7	0	18.7-148		%Rec	1	8/27/2019 7:31:28 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Toluene	ND	0.35	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Methyl tert-butyl ether (MTBE)	0.56	0.46	1.0	J	µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Naphthalene	ND	0.28	2.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Acetone	ND	1.2	10		µg/L	1	8/23/2019 3:32:45 PM	R62400
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-38
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 3:12:00 PM
Lab ID: 1908C74-001 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 3:32:45 PM	R62400
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 3:32:45 PM	R62400
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Chloroform	0.36	0.12	1.0	J	µg/L	1	8/23/2019 3:32:45 PM	R62400
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 3:32:45 PM	R62400
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 3:32:45 PM	R62400
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Styrene	ND	0.19	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-38
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 3:12:00 PM
Lab ID: 1908C74-001 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Tetrachloroethene (PCE)	0.44	0.15	1.0	J	µg/L	1	8/23/2019 3:32:45 PM	R62400
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Trichloroethene (TCE)	0.25	0.17	1.0	J	µg/L	1	8/23/2019 3:32:45 PM	R62400
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 3:32:45 PM	R62400
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/23/2019 3:32:45 PM	R62400
Surr: 1,2-Dichloroethane-d4	98.5	0	70-130		%Rec	1	8/23/2019 3:32:45 PM	R62400
Surr: 4-Bromofluorobenzene	96.7	0	70-130		%Rec	1	8/23/2019 3:32:45 PM	R62400
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	8/23/2019 3:32:45 PM	R62400
Surr: Toluene-d8	100	0	70-130		%Rec	1	8/23/2019 3:32:45 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	8/23/2019 3:32:45 PM	G62400
Surr: BFB	97.7	0	70-130		%Rec	1	8/23/2019 3:32:45 PM	G62400

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-082019-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019
Lab ID: 1908C74-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	12	0.35	1.0		mg/L	1	8/26/2019 4:09:41 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 4:09:41 PM	47020
Surr: DNOP	106	0	70-130		%Rec	1	8/26/2019 4:09:41 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.073	0.50		mg/L	5	8/22/2019 12:49:29 AM	A62337
Chloride	8700	500	500		mg/L	1000	9/6/2019 11:06:08 AM	R62729
Bromide	0.40	0.089	0.50	J	mg/L	5	8/22/2019 12:49:29 AM	A62337
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 12:49:29 AM	A62337
Sulfate	8.1	0.33	2.5		mg/L	5	8/22/2019 12:49:29 AM	A62337
Nitrate+Nitrite as N	8.0	0.48	10	J	mg/L	50	9/6/2019 7:46:22 PM	R62729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.22	0.0025	0.020	*	mg/L	1	9/14/2019 11:13:55 AM	B62943
Barium	40	0.032	0.10	*	mg/L	50	9/14/2019 11:24:16 AM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 11:13:55 AM	B62943
Boron	0.55	0.0045	0.040		mg/L	1	9/14/2019 11:13:55 AM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 11:13:55 AM	B62943
Calcium	1000	3.1	50		mg/L	50	9/14/2019 11:24:16 AM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 11:13:55 AM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 11:13:55 AM	B62943
Copper	0.0072	0.0013	0.0060		mg/L	1	9/14/2019 11:13:55 AM	B62943
Iron	24	0.44	1.0	*	mg/L	50	9/14/2019 11:24:16 AM	B62943
Magnesium	300	0.25	5.0		mg/L	5	9/14/2019 11:15:51 AM	B62943
Manganese	9.2	0.014	0.10	*	mg/L	50	9/14/2019 11:24:16 AM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 11:13:55 AM	B62943
Nickel	0.011	0.0040	0.010		mg/L	1	9/14/2019 11:13:55 AM	B62943
Potassium	14	0.16	1.0		mg/L	1	9/14/2019 11:13:55 AM	B62943
Silver	0.012	0.00094	0.0050		mg/L	1	9/14/2019 11:13:55 AM	B62943
Sodium	4400	21	50		mg/L	50	9/14/2019 11:24:16 AM	B62943
Zinc	0.0028	0.0023	0.010	J	mg/L	1	9/14/2019 11:13:55 AM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.3	0.012	0.10	*	mg/L	5	9/4/2019 7:21:25 PM	47250
Barium	40	0.032	0.10	*	mg/L	50	9/9/2019 2:41:25 PM	47250
Beryllium	0.0011	0.00028	0.0020	J	mg/L	1	9/4/2019 7:19:22 PM	47250
Boron	0.55	0.0045	0.040		mg/L	1	9/12/2019 9:09:16 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 7:19:22 PM	47250
Chromium	ND	0.0015	0.0060		mg/L	1	9/4/2019 7:19:22 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/4/2019 7:19:22 PM	47250
Copper	ND	0.0041	0.0060		mg/L	1	9/4/2019 7:19:22 PM	47250

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-082019-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019
Lab ID: 1908C74-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Iron	25	0.44	1.0	*	mg/L	50	9/9/2019 2:41:25 PM	47250
Manganese	9.3	0.0029	0.020	*	mg/L	10	9/9/2019 2:39:17 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 7:19:22 PM	47250
Nickel	0.0086	0.0040	0.010	J	mg/L	1	9/4/2019 7:19:22 PM	47250
Silver	0.013	0.0014	0.0050		mg/L	1	9/4/2019 7:19:22 PM	47250
Zinc	ND	0.0058	0.010		mg/L	1	9/4/2019 7:19:22 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/4/2019 3:20:41 PM	A62654
Arsenic	ND	0.00050	0.0050		mg/L	5	9/4/2019 3:20:41 PM	A62654
Lead	0.00050	0.00027	0.0025	J	mg/L	5	9/4/2019 3:20:41 PM	A62654
Selenium	ND	0.00086	0.0050		mg/L	5	9/4/2019 3:20:41 PM	A62654
Thallium	ND	0.00024	0.0025		mg/L	5	9/4/2019 3:20:41 PM	A62654
Uranium	0.00041	0.00037	0.0025	J	mg/L	5	9/4/2019 3:20:41 PM	A62654
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/18/2019 6:00:33 PM	47250
Arsenic	ND	0.0016	0.0050		mg/L	5	9/18/2019 6:00:33 PM	47250
Lead	0.0025	0.00027	0.0025		mg/L	5	9/18/2019 6:00:33 PM	47250
Selenium	ND	0.0024	0.0050		mg/L	5	9/18/2019 6:00:33 PM	47250
Thallium	ND	0.00026	0.0025		mg/L	5	9/18/2019 6:00:33 PM	47250
Uranium	0.00063	0.00042	0.0025	J	mg/L	5	9/18/2019 6:00:33 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.00019	0.0010		mg/L	5	9/11/2019 11:12:53 AM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	3.9	3.0	10	J	µg/L	1	8/27/2019 8:01:46 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 8:01:46 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 8:01:46 PM	47000

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-082019-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019
Lab ID: 1908C74-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 8:01:46 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Carbazole	12	2.9	10		µg/L	1	8/27/2019 8:01:46 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 8:01:46 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 8:01:46 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 8:01:46 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 8:01:46 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 8:01:46 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 8:01:46 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 8:01:46 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Fluorene	16	2.9	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
1-Methylnaphthalene	110	3.1	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 8:01:46 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 8:01:46 PM	47000

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-082019-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019
Lab ID: 1908C74-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 8:01:46 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Naphthalene	17	4.1	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 8:01:46 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 8:01:46 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 8:01:46 PM	47000
Phenanthrene	18	2.8	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 8:01:46 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 8:01:46 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 8:01:46 PM	47000
Surr: 2-Fluorophenol	44.9	0	15-101		%Rec	1	8/27/2019 8:01:46 PM	47000
Surr: Phenol-d5	40.0	0	15-84.6		%Rec	1	8/27/2019 8:01:46 PM	47000
Surr: 2,4,6-Tribromophenol	60.6	0	27.8-112		%Rec	1	8/27/2019 8:01:46 PM	47000
Surr: Nitrobenzene-d5	83.8	0	33-113		%Rec	1	8/27/2019 8:01:46 PM	47000
Surr: 2-Fluorobiphenyl	71.9	0	26.6-107		%Rec	1	8/27/2019 8:01:46 PM	47000
Surr: 4-Terphenyl-d14	63.4	0	18.7-148		%Rec	1	8/27/2019 8:01:46 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	9.5	0.83	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Toluene	ND	1.8	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Ethylbenzene	40	0.66	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Methyl tert-butyl ether (MTBE)	ND	2.3	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2,4-Trimethylbenzene	3.5	1.1	5.0	J	µg/L	5	8/26/2019 1:14:07 PM	R62427
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Naphthalene	15	1.4	10		µg/L	5	8/26/2019 1:14:07 PM	R62427
1-Methylnaphthalene	120	1.6	20		µg/L	5	8/26/2019 1:14:07 PM	R62427
2-Methylnaphthalene	4.5	1.7	20	J	µg/L	5	8/26/2019 1:14:07 PM	R62427
Acetone	ND	6.0	50		µg/L	5	8/26/2019 1:14:07 PM	R62427
Bromobenzene	ND	1.2	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Bromodichloromethane	ND	0.67	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427

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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-082019-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019
Lab ID: 1908C74-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Bromoform	ND	1.4	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Bromomethane	ND	1.4	15		µg/L	5	8/26/2019 1:14:07 PM	R62427
2-Butanone	ND	10	50		µg/L	5	8/26/2019 1:14:07 PM	R62427
Carbon disulfide	ND	2.3	50		µg/L	5	8/26/2019 1:14:07 PM	R62427
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Chlorobenzene	ND	0.97	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Chloroethane	ND	0.89	10		µg/L	5	8/26/2019 1:14:07 PM	R62427
Chloroform	ND	0.61	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Chloromethane	ND	1.6	15		µg/L	5	8/26/2019 1:14:07 PM	R62427
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	8/26/2019 1:14:07 PM	R62427
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Dibromomethane	ND	1.0	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
2,2-Dichloropropane	ND	1.2	10		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
2-Hexanone	ND	7.7	50		µg/L	5	8/26/2019 1:14:07 PM	R62427
Isopropylbenzene	19	0.96	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	8/26/2019 1:14:07 PM	R62427
Methylene Chloride	ND	0.77	15		µg/L	5	8/26/2019 1:14:07 PM	R62427
n-Butylbenzene	5.7	1.1	15	J	µg/L	5	8/26/2019 1:14:07 PM	R62427
n-Propylbenzene	24	1.1	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
sec-Butylbenzene	12	1.2	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Styrene	ND	0.96	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	8/26/2019 1:14:07 PM	R62427

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Qualifiers:

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PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-082019-1
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019
Lab ID: 1908C74-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	8/26/2019 1:14:07 PM	R62427
Vinyl chloride	ND	0.90	5.0		µg/L	5	8/26/2019 1:14:07 PM	R62427
Xylenes, Total	ND	2.3	7.5		µg/L	5	8/26/2019 1:14:07 PM	R62427
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	5	8/26/2019 1:14:07 PM	R62427
Surr: 4-Bromofluorobenzene	92.9	0	70-130		%Rec	5	8/26/2019 1:14:07 PM	R62427
Surr: Dibromofluoromethane	101	0	70-130		%Rec	5	8/26/2019 1:14:07 PM	R62427
Surr: Toluene-d8	97.4	0	70-130		%Rec	5	8/26/2019 1:14:07 PM	R62427
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	1.2	0.15	0.25		mg/L	5	8/26/2019 1:14:07 PM	G62427
Surr: BFB	96.9	0	70-130		%Rec	5	8/26/2019 1:14:07 PM	G62427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-39
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 4:51:00 PM
Lab ID: 1908C74-003 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	17	0.35	1.0		mg/L	1	8/26/2019 4:31:58 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 4:31:58 PM	47020
Surr: DNOP	107	0	70-130		%Rec	1	8/26/2019 4:31:58 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.073	0.50		mg/L	5	8/22/2019 1:15:13 AM	A62337
Chloride	8900	500	500		mg/L	1000	9/6/2019 11:18:29 AM	R62729
Bromide	0.45	0.089	0.50	J	mg/L	5	8/22/2019 1:15:13 AM	A62337
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 1:15:13 AM	A62337
Sulfate	4.5	0.33	2.5		mg/L	5	8/22/2019 1:15:13 AM	A62337
Nitrate+Nitrite as N	8.1	0.48	10	J	mg/L	50	9/6/2019 7:58:43 PM	R62729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.050	0.0025	0.020		mg/L	1	9/14/2019 11:26:32 AM	B62943
Barium	43	0.032	0.10	*	mg/L	50	9/14/2019 11:30:40 AM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 11:26:32 AM	B62943
Boron	0.55	0.0045	0.040		mg/L	1	9/14/2019 11:26:32 AM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 11:26:32 AM	B62943
Calcium	1100	3.1	50		mg/L	50	9/14/2019 11:30:40 AM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 11:26:32 AM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 11:26:32 AM	B62943
Copper	0.0052	0.0013	0.0060	J	mg/L	1	9/14/2019 11:26:32 AM	B62943
Iron	25	0.44	1.0	*	mg/L	50	9/14/2019 11:30:40 AM	B62943
Magnesium	300	0.25	5.0		mg/L	5	9/14/2019 11:28:29 AM	B62943
Manganese	9.6	0.014	0.10	*	mg/L	50	9/14/2019 11:30:40 AM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 11:26:32 AM	B62943
Nickel	0.0091	0.0040	0.010	J	mg/L	1	9/14/2019 11:26:32 AM	B62943
Potassium	14	0.16	1.0		mg/L	1	9/14/2019 11:26:32 AM	B62943
Silver	0.012	0.00094	0.0050		mg/L	1	9/14/2019 11:26:32 AM	B62943
Sodium	4600	21	50		mg/L	50	9/14/2019 11:30:40 AM	B62943
Zinc	ND	0.0023	0.010		mg/L	1	9/14/2019 11:26:32 AM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	7.9	0.12	1.0	*	mg/L	50	9/9/2019 2:49:41 PM	47250
Barium	48	0.032	0.10	*	mg/L	50	9/9/2019 2:49:41 PM	47250
Beryllium	0.0015	0.00028	0.0020	J	mg/L	1	9/4/2019 7:23:24 PM	47250
Boron	0.56	0.023	0.20		mg/L	5	9/12/2019 9:11:20 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 7:23:24 PM	47250
Chromium	ND	0.0015	0.0060		mg/L	1	9/4/2019 7:23:24 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/4/2019 7:23:24 PM	47250
Copper	0.0052	0.0041	0.0060	J	mg/L	1	9/4/2019 7:23:24 PM	47250

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-39
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 4:51:00 PM
Lab ID: 1908C74-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Iron	28	0.44	1.0	*	mg/L	50	9/9/2019 2:49:41 PM	47250
Manganese	9.5	0.014	0.10	*	mg/L	50	9/9/2019 2:49:41 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 7:23:24 PM	47250
Nickel	0.012	0.0040	0.010		mg/L	1	9/4/2019 7:23:24 PM	47250
Silver	0.012	0.0014	0.0050		mg/L	1	9/4/2019 7:23:24 PM	47250
Zinc	0.0093	0.0058	0.010	J	mg/L	1	9/4/2019 7:23:24 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/4/2019 3:26:05 PM	A62654
Arsenic	ND	0.00050	0.0050		mg/L	5	9/4/2019 3:26:05 PM	A62654
Lead	ND	0.00027	0.0025		mg/L	5	9/4/2019 3:26:05 PM	A62654
Selenium	0.0013	0.00086	0.0050	J	mg/L	5	9/4/2019 3:26:05 PM	A62654
Thallium	ND	0.00024	0.0025		mg/L	5	9/4/2019 3:26:05 PM	A62654
Uranium	ND	0.00037	0.0025		mg/L	5	9/4/2019 3:26:05 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/5/2019 5:51:37 PM	47250
Arsenic	ND	0.0016	0.0050		mg/L	5	9/5/2019 5:51:37 PM	47250
Lead	0.0061	0.00027	0.0025		mg/L	5	9/5/2019 5:51:37 PM	47250
Selenium	0.0029	0.0024	0.0050	J	mg/L	5	9/5/2019 5:51:37 PM	47250
Thallium	ND	0.00026	0.0025		mg/L	5	9/5/2019 5:51:37 PM	47250
Uranium	0.00091	0.00042	0.0025	J	mg/L	5	9/5/2019 5:51:37 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000074	0.000038	0.00020	J	mg/L	1	9/10/2019 5:02:55 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 8:31:55 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 8:31:55 PM	47000

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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-39
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 4:51:00 PM
Lab ID: 1908C74-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 8:31:55 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Carbazole	12	2.9	10		µg/L	1	8/27/2019 8:31:55 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 8:31:55 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 8:31:55 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 8:31:55 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 8:31:55 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 8:31:55 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 8:31:55 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 8:31:55 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Fluorene	14	2.9	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
1-Methylnaphthalene	120	3.1	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 8:31:55 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 8:31:55 PM	47000

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-39
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 4:51:00 PM
Lab ID: 1908C74-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 8:31:55 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Naphthalene	15	4.1	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 8:31:55 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 8:31:55 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 8:31:55 PM	47000
Phenanthrene	17	2.8	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 8:31:55 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 8:31:55 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 8:31:55 PM	47000
Surr: 2-Fluorophenol	35.1	0	15-101		%Rec	1	8/27/2019 8:31:55 PM	47000
Surr: Phenol-d5	41.5	0	15-84.6		%Rec	1	8/27/2019 8:31:55 PM	47000
Surr: 2,4,6-Tribromophenol	45.7	0	27.8-112		%Rec	1	8/27/2019 8:31:55 PM	47000
Surr: Nitrobenzene-d5	88.1	0	33-113		%Rec	1	8/27/2019 8:31:55 PM	47000
Surr: 2-Fluorobiphenyl	74.2	0	26.6-107		%Rec	1	8/27/2019 8:31:55 PM	47000
Surr: 4-Terphenyl-d14	100	0	18.7-148		%Rec	1	8/27/2019 8:31:55 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	8.3	0.83	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Toluene	ND	1.8	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Ethylbenzene	38	0.66	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Methyl tert-butyl ether (MTBE)	ND	2.3	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2,4-Trimethylbenzene	3.3	1.1	5.0	J	µg/L	5	8/23/2019 6:25:17 PM	R62400
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Naphthalene	14	1.4	10		µg/L	5	8/23/2019 6:25:17 PM	R62400
1-Methylnaphthalene	110	1.6	20		µg/L	5	8/23/2019 6:25:17 PM	R62400
2-Methylnaphthalene	4.1	1.7	20	J	µg/L	5	8/23/2019 6:25:17 PM	R62400
Acetone	ND	6.0	50		µg/L	5	8/23/2019 6:25:17 PM	R62400
Bromobenzene	ND	1.2	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Bromodichloromethane	ND	0.67	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-39
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 4:51:00 PM
Lab ID: 1908C74-003 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Bromoform	ND	1.4	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Bromomethane	ND	1.4	15		µg/L	5	8/23/2019 6:25:17 PM	R62400
2-Butanone	ND	10	50		µg/L	5	8/23/2019 6:25:17 PM	R62400
Carbon disulfide	ND	2.3	50		µg/L	5	8/23/2019 6:25:17 PM	R62400
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Chlorobenzene	ND	0.97	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Chloroethane	ND	0.89	10		µg/L	5	8/23/2019 6:25:17 PM	R62400
Chloroform	ND	0.61	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Chloromethane	ND	1.6	15		µg/L	5	8/23/2019 6:25:17 PM	R62400
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	8/23/2019 6:25:17 PM	R62400
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Dibromomethane	ND	1.0	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
2,2-Dichloropropane	ND	1.2	10		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
2-Hexanone	ND	7.7	50		µg/L	5	8/23/2019 6:25:17 PM	R62400
Isopropylbenzene	17	0.96	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	8/23/2019 6:25:17 PM	R62400
Methylene Chloride	ND	0.77	15		µg/L	5	8/23/2019 6:25:17 PM	R62400
n-Butylbenzene	4.0	1.1	15	J	µg/L	5	8/23/2019 6:25:17 PM	R62400
n-Propylbenzene	20	1.1	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
sec-Butylbenzene	9.3	1.2	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Styrene	ND	0.96	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	8/23/2019 6:25:17 PM	R62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-39
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 4:51:00 PM
Lab ID: 1908C74-003 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	8/23/2019 6:25:17 PM	R62400
Vinyl chloride	ND	0.90	5.0		µg/L	5	8/23/2019 6:25:17 PM	R62400
Xylenes, Total	ND	2.3	7.5		µg/L	5	8/23/2019 6:25:17 PM	R62400
Surr: 1,2-Dichloroethane-d4	97.3	0	70-130		%Rec	5	8/23/2019 6:25:17 PM	R62400
Surr: 4-Bromofluorobenzene	88.9	0	70-130		%Rec	5	8/23/2019 6:25:17 PM	R62400
Surr: Dibromofluoromethane	96.1	0	70-130		%Rec	5	8/23/2019 6:25:17 PM	R62400
Surr: Toluene-d8	98.9	0	70-130		%Rec	5	8/23/2019 6:25:17 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	0.65	0.15	0.25		mg/L	5	8/23/2019 6:25:17 PM	G62400
Surr: BFB	99.0	0	70-130		%Rec	5	8/23/2019 6:25:17 PM	G62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-32
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 1:41:00 PM
Lab ID: 1908C74-004 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/28/2019 8:40:55 PM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/26/2019 4:54:24 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 4:54:24 PM	47020
Surr: DNOP	104	0	70-130		%Rec	1	8/26/2019 4:54:24 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.28	0.073	0.50	J	mg/L	5	8/22/2019 1:40:58 AM	A62337
Chloride	400	25	25		mg/L	50	9/6/2019 11:30:49 AM	R62729
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/22/2019 1:40:58 AM	A62337
Bromide	1.1	0.089	0.50		mg/L	5	8/22/2019 1:40:58 AM	A62337
Nitrogen, Nitrate (As N)	0.41	0.025	0.50	J	mg/L	5	8/22/2019 1:40:58 AM	A62337
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 1:40:58 AM	A62337
Sulfate	92	0.33	2.5		mg/L	5	8/22/2019 1:40:58 AM	A62337
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 11:32:56 AM	B62943
Barium	0.053	0.00065	0.0020		mg/L	1	9/14/2019 11:32:56 AM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 11:32:56 AM	B62943
Boron	1.2	0.045	0.40		mg/L	10	9/14/2019 11:35:00 AM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 11:32:56 AM	B62943
Calcium	28	0.062	1.0		mg/L	1	9/14/2019 11:32:56 AM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 11:32:56 AM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 11:32:56 AM	B62943
Copper	0.0052	0.0013	0.0060	J	mg/L	1	9/14/2019 11:32:56 AM	B62943
Iron	ND	0.0087	0.020		mg/L	1	9/14/2019 11:32:56 AM	B62943
Magnesium	5.3	0.050	1.0		mg/L	1	9/14/2019 11:32:56 AM	B62943
Manganese	0.11	0.00029	0.0020	*	mg/L	1	9/14/2019 11:32:56 AM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 11:32:56 AM	B62943
Nickel	ND	0.0040	0.010		mg/L	1	9/14/2019 11:32:56 AM	B62943
Potassium	0.53	0.16	1.0	J	mg/L	1	9/14/2019 11:32:56 AM	B62943
Silver	ND	0.00094	0.0050		mg/L	1	9/14/2019 11:32:56 AM	B62943
Sodium	600	4.2	10		mg/L	10	9/14/2019 11:35:00 AM	B62943
Zinc	0.0045	0.0023	0.010	J	mg/L	1	9/14/2019 11:32:56 AM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	2.6	0.012	0.10	*	mg/L	5	9/9/2019 3:06:19 PM	47250
Barium	0.076	0.00065	0.0020		mg/L	1	9/9/2019 2:52:01 PM	47250

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-32
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 1:41:00 PM
Lab ID: 1908C74-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 2:52:01 PM	47250
Boron	1.2	0.023	0.20		mg/L	5	9/12/2019 9:13:17 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 7:42:04 PM	47250
Chromium	ND	0.0015	0.0060		mg/L	1	9/4/2019 7:42:04 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/4/2019 7:42:04 PM	47250
Copper	0.0050	0.0041	0.0060	J	mg/L	1	9/4/2019 7:42:04 PM	47250
Iron	1.2	0.044	0.10	*	mg/L	5	9/9/2019 3:06:19 PM	47250
Manganese	0.11	0.00029	0.0020	*	mg/L	1	9/4/2019 7:42:04 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 7:42:04 PM	47250
Nickel	0.0062	0.0040	0.010	J	mg/L	1	9/9/2019 2:52:01 PM	47250
Silver	ND	0.0014	0.0050		mg/L	1	9/4/2019 7:42:04 PM	47250
Zinc	0.0059	0.0058	0.010	J	mg/L	1	9/9/2019 2:52:01 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 3:04:27 PM	A62654
Arsenic	0.0020	0.00010	0.0010		mg/L	1	9/4/2019 3:04:27 PM	A62654
Lead	0.000089	0.000055	0.00050	J	mg/L	1	9/4/2019 3:04:27 PM	A62654
Selenium	0.00025	0.00017	0.0010	J	mg/L	1	9/4/2019 3:04:27 PM	A62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 3:04:27 PM	A62654
Uranium	0.056	0.00037	0.0025	*	mg/L	5	9/4/2019 3:29:26 PM	A62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:11:14 PM	47250
Arsenic	0.0024	0.00031	0.0010		mg/L	1	9/5/2019 4:11:14 PM	47250
Lead	0.0013	0.000055	0.00050		mg/L	1	9/5/2019 4:11:14 PM	47250
Selenium	0.00077	0.00048	0.0010	J	mg/L	1	9/5/2019 4:11:14 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 4:11:14 PM	47250
Uranium	0.056	0.00042	0.0025	*	mg/L	5	9/5/2019 5:53:48 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:05:11 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-32
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 1:41:00 PM
Lab ID: 1908C74-004 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/27/2019 9:02:09 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/27/2019 9:02:09 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/27/2019 9:02:09 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/27/2019 9:02:09 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/27/2019 9:02:09 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/27/2019 9:02:09 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/27/2019 9:02:09 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/27/2019 9:02:09 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/27/2019 9:02:09 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/27/2019 9:02:09 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/27/2019 9:02:09 PM	47000

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-32
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 1:41:00 PM
Lab ID: 1908C74-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Isophorone	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/27/2019 9:02:09 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/27/2019 9:02:09 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/27/2019 9:02:09 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 9:02:09 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/27/2019 9:02:09 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/27/2019 9:02:09 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/27/2019 9:02:09 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/27/2019 9:02:09 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/27/2019 9:02:09 PM	47000
Surr: 2-Fluorophenol	45.8	0	15-101		%Rec	1	8/27/2019 9:02:09 PM	47000
Surr: Phenol-d5	35.7	0	15-84.6		%Rec	1	8/27/2019 9:02:09 PM	47000
Surr: 2,4,6-Tribromophenol	57.3	0	27.8-112		%Rec	1	8/27/2019 9:02:09 PM	47000
Surr: Nitrobenzene-d5	67.2	0	33-113		%Rec	1	8/27/2019 9:02:09 PM	47000
Surr: 2-Fluorobiphenyl	58.6	0	26.6-107		%Rec	1	8/27/2019 9:02:09 PM	47000
Surr: 4-Terphenyl-d14	65.0	0	18.7-148		%Rec	1	8/27/2019 9:02:09 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	0.31	0.17	1.0	J	µg/L	1	8/23/2019 6:54:01 PM	R62400
Toluene	ND	0.35	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Methyl tert-butyl ether (MTBE)	610	4.6	10		µg/L	10	8/26/2019 2:40:40 PM	R62427
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2-Dichloroethane (EDC)	15	0.19	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-32
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 1:41:00 PM
Lab ID: 1908C74-004 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Naphthalene	ND	0.28	2.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Acetone	ND	1.2	10		µg/L	1	8/23/2019 6:54:01 PM	R62400
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 6:54:01 PM	R62400
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 6:54:01 PM	R62400
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Chloroform	ND	0.12	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
cis-1,2-DCE	1.7	0.19	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,1-Dichloroethane	14	0.14	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,1-Dichloroethene	21	0.21	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 6:54:01 PM	R62400
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 6:54:01 PM	R62400
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 6:54:01 PM	R62400

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-32
Project: 2019 Annual GW Sampling
Collection Date: 8/20/2019 1:41:00 PM
Lab ID: 1908C74-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
sec-Butylbenzene	0.62	0.25	1.0	J	µg/L	1	8/23/2019 6:54:01 PM	R62400
Styrene	ND	0.19	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,1,1-Trichloroethane	0.22	0.17	1.0	J	µg/L	1	8/23/2019 6:54:01 PM	R62400
1,1,2-Trichloroethane	1.2	0.22	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Trichloroethene (TCE)	0.28	0.17	1.0	J	µg/L	1	8/23/2019 6:54:01 PM	R62400
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 6:54:01 PM	R62400
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/23/2019 6:54:01 PM	R62400
Surr: 1,2-Dichloroethane-d4	95.5	0	70-130		%Rec	1	8/23/2019 6:54:01 PM	R62400
Surr: 4-Bromofluorobenzene	98.4	0	70-130		%Rec	1	8/23/2019 6:54:01 PM	R62400
Surr: Dibromofluoromethane	94.8	0	70-130		%Rec	1	8/23/2019 6:54:01 PM	R62400
Surr: Toluene-d8	99.1	0	70-130		%Rec	1	8/23/2019 6:54:01 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	0.50	0.031	0.050		mg/L	1	8/23/2019 6:54:01 PM	G62400
Surr: BFB	98.2	0	70-130		%Rec	1	8/23/2019 6:54:01 PM	G62400

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-4
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 10:30:00 AM
Lab ID: 1908C74-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	8/28/2019 9:12:08 PM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	4.3	0.35	1.0		mg/L	1	8/26/2019 5:16:48 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 5:16:48 PM	47020
Surr: DNOP	109	0	70-130		%Rec	1	8/26/2019 5:16:48 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.81	0.073	0.50		mg/L	5	8/22/2019 9:02:35 PM	R62379
Chloride	220	10	10		mg/L	20	8/22/2019 9:15:26 PM	R62379
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/22/2019 9:02:35 PM	R62379
Bromide	2.3	0.089	0.50		mg/L	5	8/22/2019 9:02:35 PM	R62379
Nitrogen, Nitrate (As N)	0.12	0.025	0.50	J	mg/L	5	8/22/2019 9:02:35 PM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 9:02:35 PM	R62379
Sulfate	16	0.33	2.5		mg/L	5	8/22/2019 9:02:35 PM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 11:37:10 AM	B62943
Barium	1.8	0.0032	0.010		mg/L	5	9/14/2019 11:39:06 AM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 11:37:10 AM	B62943
Boron	0.55	0.0045	0.040		mg/L	1	9/14/2019 11:37:10 AM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 11:37:10 AM	B62943
Calcium	120	0.31	5.0		mg/L	5	9/14/2019 11:39:06 AM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 11:37:10 AM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 11:37:10 AM	B62943
Copper	0.0031	0.0013	0.0060	J	mg/L	1	9/14/2019 11:37:10 AM	B62943
Iron	1.5	0.044	0.10	*	mg/L	5	9/14/2019 11:39:06 AM	B62943
Magnesium	27	0.050	1.0		mg/L	1	9/14/2019 11:37:10 AM	B62943
Manganese	2.0	0.0014	0.010	*	mg/L	5	9/14/2019 11:39:06 AM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 11:37:10 AM	B62943
Nickel	0.0062	0.0040	0.010	J	mg/L	1	9/14/2019 11:37:10 AM	B62943
Potassium	0.97	0.16	1.0	J	mg/L	1	9/14/2019 11:37:10 AM	B62943
Silver	0.0016	0.00094	0.0050	J	mg/L	1	9/14/2019 11:37:10 AM	B62943
Sodium	350	2.1	5.0		mg/L	5	9/14/2019 11:39:06 AM	B62943
Zinc	0.0046	0.0023	0.010	J	mg/L	1	9/14/2019 11:37:10 AM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	10	0.050	0.40	*	mg/L	20	9/9/2019 3:20:06 PM	47250
Barium	2.0	0.0032	0.010		mg/L	5	9/9/2019 3:18:10 PM	47250

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-4
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 10:30:00 AM
Lab ID: 1908C74-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Beryllium	0.00066	0.00028	0.0020	J	mg/L	1	9/9/2019 3:16:11 PM	47250
Boron	0.54	0.0045	0.040		mg/L	1	9/12/2019 9:15:18 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 7:53:55 PM	47250
Chromium	0.0042	0.0015	0.0060	J	mg/L	1	9/4/2019 7:53:55 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/4/2019 7:53:55 PM	47250
Copper	0.0055	0.0041	0.0060	J	mg/L	1	9/4/2019 7:53:55 PM	47250
Iron	5.9	0.17	0.40	*	mg/L	20	9/9/2019 3:20:06 PM	47250
Manganese	2.2	0.0014	0.010	*	mg/L	5	9/4/2019 7:55:55 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 7:53:55 PM	47250
Nickel	0.012	0.0040	0.010		mg/L	1	9/9/2019 3:16:11 PM	47250
Silver	ND	0.0014	0.0050		mg/L	1	9/4/2019 7:53:55 PM	47250
Zinc	0.0094	0.0058	0.010	J	mg/L	1	9/9/2019 3:16:11 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00048	0.00039	0.0010	J	mg/L	1	9/9/2019 4:59:01 PM	A62791
Arsenic	0.0072	0.00010	0.0010		mg/L	1	9/4/2019 5:16:24 PM	C62654
Lead	0.000072	0.000055	0.00050	J	mg/L	1	9/4/2019 5:16:24 PM	C62654
Selenium	0.00060	0.00017	0.0010	J	mg/L	1	9/4/2019 5:16:24 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 5:16:24 PM	C62654
Uranium	0.0075	0.000075	0.00050		mg/L	1	9/4/2019 5:16:24 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:13:25 PM	47250
Arsenic	0.0084	0.00031	0.0010		mg/L	1	9/5/2019 4:13:25 PM	47250
Lead	0.0064	0.000055	0.00050		mg/L	1	9/5/2019 4:13:25 PM	47250
Selenium	0.0014	0.00048	0.0010		mg/L	1	9/5/2019 4:13:25 PM	47250
Thallium	0.000054	0.000052	0.00050	J	mg/L	1	9/5/2019 4:13:25 PM	47250
Uranium	0.0084	0.000085	0.00050		mg/L	1	9/5/2019 4:13:25 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:07:27 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.6	3.0	10	J	µg/L	1	8/28/2019 5:33:44 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-4
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 10:30:00 AM
Lab ID: 1908C74-005 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 5:33:44 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 5:33:44 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Carbazole	20	2.9	10		µg/L	1	8/28/2019 5:33:44 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 5:33:44 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 5:33:44 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 5:33:44 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 5:33:44 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 5:33:44 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 5:33:44 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 5:33:44 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Fluorene	7.6	2.9	10	J	µg/L	1	8/28/2019 5:33:44 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 5:33:44 PM	47000

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-4
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 10:30:00 AM
Lab ID: 1908C74-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
1-Methylnaphthalene	160	3.1	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2-Methylnaphthalene	170	3.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 5:33:44 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 5:33:44 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 5:33:44 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Naphthalene	440	41	100		µg/L	10	8/28/2019 7:06:00 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 5:33:44 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 5:33:44 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 5:33:44 PM	47000
Phenanthrene	7.5	2.8	10	J	µg/L	1	8/28/2019 5:33:44 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 5:33:44 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 5:33:44 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 5:33:44 PM	47000
Surr: 2-Fluorophenol	34.1	0	15-101		%Rec	1	8/28/2019 5:33:44 PM	47000
Surr: Phenol-d5	33.8	0	15-84.6		%Rec	1	8/28/2019 5:33:44 PM	47000
Surr: 2,4,6-Tribromophenol	42.5	0	27.8-112		%Rec	1	8/28/2019 5:33:44 PM	47000
Surr: Nitrobenzene-d5	81.8	0	33-113		%Rec	1	8/28/2019 5:33:44 PM	47000
Surr: 2-Fluorobiphenyl	75.2	0	26.6-107		%Rec	1	8/28/2019 5:33:44 PM	47000
Surr: 4-Terphenyl-d14	69.0	0	18.7-148		%Rec	1	8/28/2019 5:33:44 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	530	1.7	10		µg/L	10	8/26/2019 3:09:35 PM	R62427
Toluene	9.1	0.35	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Ethylbenzene	420	1.3	10		µg/L	10	8/26/2019 3:09:35 PM	R62427
Methyl tert-butyl ether (MTBE)	1600	4.6	10		µg/L	10	8/26/2019 3:09:35 PM	R62427
1,2,4-Trimethylbenzene	250	2.1	10		µg/L	10	8/26/2019 3:09:35 PM	R62427
1,3,5-Trimethylbenzene	57	0.19	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2-Dichloroethane (EDC)	1.5	0.19	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-4
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 10:30:00 AM
Lab ID: 1908C74-005 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Naphthalene	220	2.8	20		µg/L	10	8/26/2019 3:09:35 PM	R62427
1-Methylnaphthalene	150	3.1	40		µg/L	10	8/26/2019 3:09:35 PM	R62427
2-Methylnaphthalene	110	3.5	40		µg/L	10	8/26/2019 3:09:35 PM	R62427
Acetone	ND	1.2	10		µg/L	1	8/23/2019 7:22:42 PM	R62400
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 7:22:42 PM	R62400
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 7:22:42 PM	R62400
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Chloroform	ND	0.12	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
cis-1,2-DCE	9.1	0.19	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,1-Dichloroethane	13	0.14	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,1-Dichloroethene	17	0.21	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 7:22:42 PM	R62400
Isopropylbenzene	20	0.19	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
4-Isopropyltoluene	3.5	0.22	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 7:22:42 PM	R62400
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 7:22:42 PM	R62400

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: MKTF-4
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 10:30:00 AM
Lab ID: 1908C74-005 **Matrix:** AQUEOUS **Received Date:** 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Propylbenzene	49	0.21	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
sec-Butylbenzene	4.0	0.25	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Styrene	0.45	0.19	1.0	J	µg/L	1	8/23/2019 7:22:42 PM	R62400
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Trichloroethene (TCE)	0.83	0.17	1.0	J	µg/L	1	8/23/2019 7:22:42 PM	R62400
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 7:22:42 PM	R62400
Xylenes, Total	440	4.5	15		µg/L	10	8/26/2019 3:09:35 PM	R62427
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	8/23/2019 7:22:42 PM	R62400
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	1	8/23/2019 7:22:42 PM	R62400
Surr: Dibromofluoromethane	95.2	0	70-130		%Rec	1	8/23/2019 7:22:42 PM	R62400
Surr: Toluene-d8	102	0	70-130		%Rec	1	8/23/2019 7:22:42 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	6.4	0.031	0.050		mg/L	1	8/23/2019 7:22:42 PM	G62400
Surr: BFB	99.4	0	70-130		%Rec	1	8/23/2019 7:22:42 PM	G62400

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-20190821-1
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019
Lab ID: 1908C74-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/28/2019 9:27:38 PM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	5.9	0.35	1.0		mg/L	1	8/26/2019 5:39:22 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 5:39:22 PM	47020
Surr: DNOP	110	0	70-130		%Rec	1	8/26/2019 5:39:22 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.83	0.073	0.50		mg/L	5	8/22/2019 9:28:19 PM	R62379
Chloride	230	10	10		mg/L	20	8/22/2019 9:41:11 PM	R62379
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/22/2019 9:28:19 PM	R62379
Bromide	2.3	0.089	0.50		mg/L	5	8/22/2019 9:28:19 PM	R62379
Nitrogen, Nitrate (As N)	0.34	0.025	0.50	J	mg/L	5	8/22/2019 9:28:19 PM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 9:28:19 PM	R62379
Sulfate	15	0.33	2.5		mg/L	5	8/22/2019 9:28:19 PM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 11:43:32 AM	B62943
Barium	1.8	0.0032	0.010		mg/L	5	9/14/2019 11:51:54 AM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 11:43:32 AM	B62943
Boron	0.56	0.0045	0.040		mg/L	1	9/14/2019 11:43:32 AM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 11:43:32 AM	B62943
Calcium	110	0.31	5.0		mg/L	5	9/14/2019 11:51:54 AM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 11:43:32 AM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 11:43:32 AM	B62943
Copper	0.0032	0.0013	0.0060	J	mg/L	1	9/14/2019 11:43:32 AM	B62943
Iron	1.4	0.044	0.10	*	mg/L	5	9/14/2019 11:51:54 AM	B62943
Magnesium	29	0.050	1.0		mg/L	1	9/14/2019 11:43:32 AM	B62943
Manganese	2.0	0.0014	0.010	*	mg/L	5	9/14/2019 11:51:54 AM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 11:43:32 AM	B62943
Nickel	0.0094	0.0040	0.010	J	mg/L	1	9/14/2019 11:43:32 AM	B62943
Potassium	0.96	0.16	1.0	J	mg/L	1	9/14/2019 11:43:32 AM	B62943
Silver	0.0020	0.00094	0.0050	J	mg/L	1	9/14/2019 11:43:32 AM	B62943
Sodium	350	2.1	5.0		mg/L	5	9/14/2019 11:51:54 AM	B62943
Zinc	0.0055	0.0023	0.010	J	mg/L	1	9/14/2019 11:43:32 AM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	6.4	0.050	0.40	*	mg/L	20	9/9/2019 3:32:35 PM	47250
Barium	1.9	0.0032	0.010		mg/L	5	9/9/2019 3:30:40 PM	47250

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Qualifiers:

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B	Analyte detected in the associated Method Blank
E	Value above quantitation range
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P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-20190821-1
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019
Lab ID: 1908C74-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Beryllium	0.00040	0.00028	0.0020	J	mg/L	1	9/9/2019 3:28:40 PM	47250
Boron	0.54	0.0045	0.040		mg/L	1	9/12/2019 9:23:41 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 7:57:49 PM	47250
Chromium	0.0017	0.0015	0.0060	J	mg/L	1	9/4/2019 7:57:49 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/4/2019 7:57:49 PM	47250
Copper	ND	0.0041	0.0060		mg/L	1	9/4/2019 7:57:49 PM	47250
Iron	4.1	0.044	0.10	*	mg/L	5	9/9/2019 3:30:40 PM	47250
Manganese	2.2	0.0014	0.010	*	mg/L	5	9/4/2019 7:59:48 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 7:57:49 PM	47250
Nickel	0.011	0.0040	0.010		mg/L	1	9/9/2019 3:28:40 PM	47250
Silver	0.0015	0.0014	0.0050	J	mg/L	1	9/4/2019 7:57:49 PM	47250
Zinc	0.0079	0.0058	0.010	J	mg/L	1	9/9/2019 3:28:40 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:01:43 PM	A62791
Arsenic	0.0075	0.00010	0.0010		mg/L	1	9/4/2019 5:24:32 PM	C62654
Lead	0.000057	0.000055	0.00050	J	mg/L	1	9/4/2019 5:24:32 PM	C62654
Selenium	0.00046	0.00017	0.0010	J	mg/L	1	9/4/2019 5:24:32 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 5:24:32 PM	C62654
Uranium	0.0074	0.000075	0.00050		mg/L	1	9/4/2019 5:24:32 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:15:37 PM	47250
Arsenic	0.0082	0.00031	0.0010		mg/L	1	9/5/2019 4:15:37 PM	47250
Lead	0.0039	0.000055	0.00050		mg/L	1	9/5/2019 4:15:37 PM	47250
Selenium	0.00089	0.00048	0.0010	J	mg/L	1	9/5/2019 4:15:37 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 4:15:37 PM	47250
Uranium	0.0076	0.000085	0.00050		mg/L	1	9/5/2019 4:15:37 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:09:42 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.2	3.0	10	J	µg/L	1	8/28/2019 6:04:17 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000

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Qualifiers:

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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-20190821-1
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019
Lab ID: 1908C74-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 6:04:17 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 6:04:17 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Carbazole	20	2.9	10		µg/L	1	8/28/2019 6:04:17 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 6:04:17 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 6:04:17 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 6:04:17 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 6:04:17 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 6:04:17 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 6:04:17 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 6:04:17 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Fluorene	6.5	2.9	10	J	µg/L	1	8/28/2019 6:04:17 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 6:04:17 PM	47000

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-20190821-1
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019
Lab ID: 1908C74-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
1-Methylnaphthalene	150	3.1	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2-Methylnaphthalene	170	3.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 6:04:17 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 6:04:17 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 6:04:17 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Naphthalene	340	41	100		µg/L	10	8/28/2019 6:35:12 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 6:04:17 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 6:04:17 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 6:04:17 PM	47000
Phenanthrene	4.9	2.8	10	J	µg/L	1	8/28/2019 6:04:17 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 6:04:17 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 6:04:17 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 6:04:17 PM	47000
Surr: 2-Fluorophenol	50.0	0	15-101		%Rec	1	8/28/2019 6:04:17 PM	47000
Surr: Phenol-d5	33.2	0	15-84.6		%Rec	1	8/28/2019 6:04:17 PM	47000
Surr: 2,4,6-Tribromophenol	57.8	0	27.8-112		%Rec	1	8/28/2019 6:04:17 PM	47000
Surr: Nitrobenzene-d5	77.5	0	33-113		%Rec	1	8/28/2019 6:04:17 PM	47000
Surr: 2-Fluorobiphenyl	70.1	0	26.6-107		%Rec	1	8/28/2019 6:04:17 PM	47000
Surr: 4-Terphenyl-d14	69.3	0	18.7-148		%Rec	1	8/28/2019 6:04:17 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	820	8.3	50		µg/L	50	8/26/2019 3:38:32 PM	R62427
Toluene	12	1.8	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Ethylbenzene	630	6.6	50		µg/L	50	8/26/2019 3:38:32 PM	R62427
Methyl tert-butyl ether (MTBE)	1700	23	50		µg/L	50	8/26/2019 3:38:32 PM	R62427
1,2,4-Trimethylbenzene	420	1.1	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,3,5-Trimethylbenzene	82	0.94	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2-Dichloroethane (EDC)	2.7	0.97	5.0	J	µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-20190821-1
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019
Lab ID: 1908C74-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Naphthalene	360	1.4	10		µg/L	5	8/23/2019 7:51:22 PM	R62400
1-Methylnaphthalene	250	1.6	20		µg/L	5	8/23/2019 7:51:22 PM	R62400
2-Methylnaphthalene	210	1.7	20		µg/L	5	8/23/2019 7:51:22 PM	R62400
Acetone	ND	6.0	50		µg/L	5	8/23/2019 7:51:22 PM	R62400
Bromobenzene	ND	1.2	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Bromodichloromethane	ND	0.67	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Bromoform	ND	1.4	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Bromomethane	ND	1.4	15		µg/L	5	8/23/2019 7:51:22 PM	R62400
2-Butanone	ND	10	50		µg/L	5	8/23/2019 7:51:22 PM	R62400
Carbon disulfide	ND	2.3	50		µg/L	5	8/23/2019 7:51:22 PM	R62400
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Chlorobenzene	ND	0.97	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Chloroethane	ND	0.89	10		µg/L	5	8/23/2019 7:51:22 PM	R62400
Chloroform	ND	0.61	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Chloromethane	ND	1.6	15		µg/L	5	8/23/2019 7:51:22 PM	R62400
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
cis-1,2-DCE	4.0	0.95	5.0	J	µg/L	5	8/23/2019 7:51:22 PM	R62400
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	8/23/2019 7:51:22 PM	R62400
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Dibromomethane	ND	1.0	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,1-Dichloroethane	6.8	0.70	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,1-Dichloroethene	10	1.0	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
2,2-Dichloropropane	ND	1.2	10		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
2-Hexanone	ND	7.7	50		µg/L	5	8/23/2019 7:51:22 PM	R62400
Isopropylbenzene	29	0.96	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
4-Isopropyltoluene	4.5	1.1	5.0	J	µg/L	5	8/23/2019 7:51:22 PM	R62400
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	8/23/2019 7:51:22 PM	R62400
Methylene Chloride	1.1	0.77	15	J	µg/L	5	8/23/2019 7:51:22 PM	R62400
n-Butylbenzene	ND	1.1	15		µg/L	5	8/23/2019 7:51:22 PM	R62400

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: DUP-20190821-1
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019
Lab ID: 1908C74-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
n-Propylbenzene	68	1.1	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
sec-Butylbenzene	5.3	1.2	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Styrene	ND	0.96	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	8/23/2019 7:51:22 PM	R62400
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Trichloroethene (TCE)	1.2	0.83	5.0	J	µg/L	5	8/23/2019 7:51:22 PM	R62400
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	8/23/2019 7:51:22 PM	R62400
Vinyl chloride	ND	0.90	5.0		µg/L	5	8/23/2019 7:51:22 PM	R62400
Xylenes, Total	700	2.3	7.5		µg/L	5	8/23/2019 7:51:22 PM	R62400
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	5	8/23/2019 7:51:22 PM	R62400
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	5	8/23/2019 7:51:22 PM	R62400
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	5	8/23/2019 7:51:22 PM	R62400
Surr: Toluene-d8	100	0	70-130		%Rec	5	8/23/2019 7:51:22 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	10	0.15	0.25		mg/L	5	8/23/2019 7:51:22 PM	G62400
Surr: BFB	101	0	70-130		%Rec	5	8/23/2019 7:51:22 PM	G62400

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: EB-2
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 12:15:00 PM
Lab ID: 1908C74-007
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/28/2019 9:43:09 PM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/26/2019 6:02:00 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 6:02:00 PM	47020
Surr: DNOP	109	0	70-130		%Rec	1	8/26/2019 6:02:00 PM	47020
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.015	0.10		mg/L	1	8/22/2019 9:54:03 PM	R62379
Chloride	ND	0.50	0.50		mg/L	1	8/22/2019 9:54:03 PM	R62379
Nitrogen, Nitrite (As N)	ND	0.0054	0.10		mg/L	1	8/22/2019 9:54:03 PM	R62379
Bromide	ND	0.018	0.10		mg/L	1	8/22/2019 9:54:03 PM	R62379
Nitrogen, Nitrate (As N)	0.078	0.0050	0.10	J	mg/L	1	8/22/2019 9:54:03 PM	R62379
Phosphorus, Orthophosphate (As P)	ND	0.25	0.50		mg/L	1	8/22/2019 9:54:03 PM	R62379
Sulfate	ND	0.067	0.50		mg/L	1	8/22/2019 9:54:03 PM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 11:56:23 AM	B62943
Barium	ND	0.00065	0.0020		mg/L	1	9/14/2019 11:56:23 AM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 11:56:23 AM	B62943
Boron	0.010	0.0045	0.040	J	mg/L	1	9/14/2019 11:56:23 AM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 11:56:23 AM	B62943
Calcium	ND	0.062	1.0		mg/L	1	9/14/2019 11:56:23 AM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 11:56:23 AM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 11:56:23 AM	B62943
Copper	ND	0.0013	0.0060		mg/L	1	9/14/2019 11:56:23 AM	B62943
Iron	ND	0.0087	0.020		mg/L	1	9/14/2019 11:56:23 AM	B62943
Magnesium	ND	0.050	1.0		mg/L	1	9/14/2019 11:56:23 AM	B62943
Manganese	ND	0.00029	0.0020		mg/L	1	9/14/2019 11:56:23 AM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 11:56:23 AM	B62943
Nickel	ND	0.0040	0.010		mg/L	1	9/14/2019 11:56:23 AM	B62943
Potassium	ND	0.16	1.0		mg/L	1	9/14/2019 11:56:23 AM	B62943
Silver	ND	0.00094	0.0050		mg/L	1	9/14/2019 11:56:23 AM	B62943
Sodium	ND	0.42	1.0		mg/L	1	9/14/2019 11:56:23 AM	B62943
Zinc	0.0079	0.0023	0.010	J	mg/L	1	9/14/2019 11:56:23 AM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/9/2019 3:34:49 PM	A62788
Barium	ND	0.00065	0.0020		mg/L	1	9/9/2019 3:34:49 PM	A62788

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: EB-2
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 12:15:00 PM
Lab ID: 1908C74-007
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 3:34:49 PM	A62788
Boron	0.0095	0.0045	0.040	J	mg/L	1	9/9/2019 3:34:49 PM	A62788
Cadmium	ND	0.00074	0.0020		mg/L	1	9/9/2019 3:34:49 PM	A62788
Chromium	ND	0.0015	0.0060		mg/L	1	9/9/2019 3:34:49 PM	A62788
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 3:34:49 PM	A62788
Copper	ND	0.0041	0.0060		mg/L	1	9/9/2019 3:34:49 PM	A62788
Iron	ND	0.0087	0.020		mg/L	1	9/9/2019 3:34:49 PM	A62788
Manganese	ND	0.00029	0.0020		mg/L	1	9/9/2019 3:34:49 PM	A62788
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/9/2019 3:34:49 PM	A62788
Nickel	ND	0.0040	0.010		mg/L	1	9/9/2019 3:34:49 PM	A62788
Silver	ND	0.0014	0.0050		mg/L	1	9/9/2019 3:34:49 PM	A62788
Zinc	ND	0.0058	0.010		mg/L	1	9/9/2019 3:34:49 PM	A62788
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:04:26 PM	A62791
Arsenic	ND	0.00010	0.0010		mg/L	1	9/4/2019 5:32:41 PM	C62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 5:32:41 PM	C62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 5:32:41 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 5:32:41 PM	C62654
Uranium	ND	0.000075	0.00050		mg/L	1	9/4/2019 5:32:41 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/4/2019 4:43:52 PM	B62654
Arsenic	ND	0.00031	0.0010		mg/L	1	9/4/2019 4:43:52 PM	B62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 4:43:52 PM	B62654
Selenium	ND	0.00048	0.0010		mg/L	1	9/4/2019 4:43:52 PM	B62654
Thallium	ND	0.000052	0.00050		mg/L	1	9/4/2019 4:43:52 PM	B62654
Uranium	ND	0.000085	0.00050		mg/L	1	9/4/2019 4:43:52 PM	B62654
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:16:35 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: EB-2
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 12:15:00 PM
Lab ID: 1908C74-007
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 1:05:34 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 1:05:34 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/28/2019 1:05:34 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 1:05:34 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 1:05:34 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 1:05:34 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 1:05:34 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 1:05:34 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 1:05:34 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 1:05:34 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 1:05:34 PM	47000

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: EB-2
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 12:15:00 PM
Lab ID: 1908C74-007
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 1:05:34 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 1:05:34 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 1:05:34 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 1:05:34 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 1:05:34 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 1:05:34 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 1:05:34 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 1:05:34 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 1:05:34 PM	47000
Surr: 2-Fluorophenol	45.8	0	15-101		%Rec	1	8/28/2019 1:05:34 PM	47000
Surr: Phenol-d5	32.9	0	15-84.6		%Rec	1	8/28/2019 1:05:34 PM	47000
Surr: 2,4,6-Tribromophenol	51.4	0	27.8-112		%Rec	1	8/28/2019 1:05:34 PM	47000
Surr: Nitrobenzene-d5	62.6	0	33-113		%Rec	1	8/28/2019 1:05:34 PM	47000
Surr: 2-Fluorobiphenyl	52.1	0	26.6-107		%Rec	1	8/28/2019 1:05:34 PM	47000
Surr: 4-Terphenyl-d14	62.7	0	18.7-148		%Rec	1	8/28/2019 1:05:34 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	0.19	0.17	1.0	J	µg/L	1	8/23/2019 8:20:05 PM	R62400
Toluene	ND	0.35	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Methyl tert-butyl ether (MTBE)	0.51	0.46	1.0	J	µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2,4-Trimethylbenzene	0.32	0.21	1.0	J	µg/L	1	8/23/2019 8:20:05 PM	R62400
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400

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Lab ID: 1908C74-007
Matrix: AQUEOUS
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Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Naphthalene	0.30	0.28	2.0	J	µg/L	1	8/23/2019 8:20:05 PM	R62400
1-Methylnaphthalene	0.40	0.31	4.0	J	µg/L	1	8/23/2019 8:20:05 PM	R62400
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Acetone	3.3	1.2	10	J	µg/L	1	8/23/2019 8:20:05 PM	R62400
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 8:20:05 PM	R62400
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 8:20:05 PM	R62400
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Chloroform	ND	0.12	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 8:20:05 PM	R62400
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 8:20:05 PM	R62400
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 8:20:05 PM	R62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: EB-2
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 12:15:00 PM
Lab ID: 1908C74-007
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Styrene	ND	0.19	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 8:20:05 PM	R62400
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/23/2019 8:20:05 PM	R62400
Surr: 1,2-Dichloroethane-d4	91.7	0	70-130		%Rec	1	8/23/2019 8:20:05 PM	R62400
Surr: 4-Bromofluorobenzene	95.5	0	70-130		%Rec	1	8/23/2019 8:20:05 PM	R62400
Surr: Dibromofluoromethane	93.8	0	70-130		%Rec	1	8/23/2019 8:20:05 PM	R62400
Surr: Toluene-d8	99.1	0	70-130		%Rec	1	8/23/2019 8:20:05 PM	R62400
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **JMR**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	8/23/2019 8:20:05 PM	G62400
Surr: BFB	96.4	0	70-130		%Rec	1	8/23/2019 8:20:05 PM	G62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: Trip Blank
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908C74-008
Matrix: TRIP BLANK
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Toluene	0.41	0.35	1.0	J	µg/L	1	8/23/2019 8:48:46 PM	R62400
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Naphthalene	ND	0.28	2.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Acetone	1.8	1.2	10	J	µg/L	1	8/23/2019 8:48:46 PM	R62400
Bromobenzene	ND	0.24	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Bromoform	ND	0.29	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Bromomethane	ND	0.27	3.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
2-Butanone	ND	2.1	10		µg/L	1	8/23/2019 8:48:46 PM	R62400
Carbon disulfide	ND	0.45	10		µg/L	1	8/23/2019 8:48:46 PM	R62400
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Chlorobenzene	0.49	0.19	1.0	J	µg/L	1	8/23/2019 8:48:46 PM	R62400
Chloroethane	ND	0.18	2.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Chloroform	ND	0.12	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Chloromethane	ND	0.32	3.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Dibromomethane	ND	0.21	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/23/2019 8:48:46 PM	R62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor, Gallup
Client Sample ID: Trip Blank
Project: 2019 Annual GW Sampling
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908C74-008
Matrix: TRIP BLANK
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **JMR**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
2-Hexanone	ND	1.5	10		µg/L	1	8/23/2019 8:48:46 PM	R62400
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/23/2019 8:48:46 PM	R62400
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Styrene	ND	0.19	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/23/2019 8:48:46 PM	R62400
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/23/2019 8:48:46 PM	R62400
Surr: 1,2-Dichloroethane-d4	93.4	0	70-130		%Rec	1	8/23/2019 8:48:46 PM	R62400
Surr: 4-Bromofluorobenzene	97.6	0	70-130		%Rec	1	8/23/2019 8:48:46 PM	R62400
Surr: Dibromofluoromethane	92.8	0	70-130		%Rec	1	8/23/2019 8:48:46 PM	R62400
Surr: Toluene-d8	104	0	70-130		%Rec	1	8/23/2019 8:48:46 PM	R62400

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47250** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **1908C74-003FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-39** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.48	0.0020	0.5000	0.001494	95.4	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.8	70	130			
Chromium	0.45	0.0060	0.5000	0	89.6	70	130			
Cobalt	0.40	0.0060	0.5000	0	80.3	70	130			
Copper	0.53	0.0060	0.5000	0.005245	105	70	130			
Molybdenum	0.42	0.0080	0.5000	0	83.2	70	130			
Nickel	0.42	0.010	0.5000	0.01198	81.8	70	130			
Silver	0.13	0.0050	0.1000	0.01244	114	70	130			
Zinc	0.44	0.010	0.5000	0.009330	85.8	70	130			

Sample ID: **1908C74-003FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-39** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.48	0.0020	0.5000	0.001494	96.2	70	130	0.834	20	
Cadmium	0.51	0.0020	0.5000	0	101	70	130	1.48	20	
Chromium	0.45	0.0060	0.5000	0	90.3	70	130	0.855	20	
Cobalt	0.41	0.0060	0.5000	0	81.2	70	130	1.12	20	
Copper	0.53	0.0060	0.5000	0.005245	105	70	130	0.316	20	
Molybdenum	0.42	0.0080	0.5000	0	84.2	70	130	1.20	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **1908C74-003FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-39** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nickel	0.42	0.010	0.5000	0.01198	82.2	70	130	0.397	20	
Silver	0.13	0.0050	0.1000	0.01244	114	70	130	0.247	20	
Zinc	0.44	0.010	0.5000	0.009330	86.2	70	130	0.432	20	

Sample ID: **1908C74-004FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-32** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133422** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	97.8	70	130			
Chromium	0.48	0.0060	0.5000	0	96.6	70	130			
Cobalt	0.46	0.0060	0.5000	0	91.0	70	130			
Copper	0.52	0.0060	0.5000	0.004973	102	70	130			
Manganese	0.59	0.0020	0.5000	0.1143	94.8	70	130			
Molybdenum	0.48	0.0080	0.5000	0	96.4	70	130			
Silver	0.10	0.0050	0.1000	0	104	70	130			

Sample ID: **1908C74-004FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-32** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133423** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	97.0	70	130	0.870	20	
Chromium	0.48	0.0060	0.5000	0	96.7	70	130	0.108	20	
Cobalt	0.45	0.0060	0.5000	0	90.8	70	130	0.238	20	
Copper	0.52	0.0060	0.5000	0.004973	102	70	130	0.331	20	
Manganese	0.59	0.0020	0.5000	0.1143	96.1	70	130	1.06	20	
Molybdenum	0.48	0.0080	0.5000	0	96.4	70	130	0.0220	20	
Silver	0.10	0.0050	0.1000	0	103	70	130	0.953	20	

Sample ID: **LLLCS-47250** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133461** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	111	50	150			J
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Beryllium	0.0020	0.0020	0.002000	0	99.4	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	85.7	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.1	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LLLCS-47250** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133461** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.0057	0.0060	0.006000	0	95.6	50	150			J
Copper	0.0074	0.0060	0.006000	0	124	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0022	0.0020	0.002000	0	109	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0042	0.010	0.005000	0	83.0	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Zinc	0.011	0.010	0.01000	0	107	50	150			

Sample ID: **LCS-47250** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133463** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	101	85	115			
Barium	0.47	0.0020	0.5000	0	94.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.3	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.6	85	115			
Nickel	0.47	0.010	0.5000	0	94.1	85	115			
Silver	0.098	0.0050	0.1000	0	98.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **A62788** RunNo: **62788**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139048** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **A62788** RunNo: **62788**

Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139048** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **A62788** RunNo: **62788**

Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	107	50	150			J
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Beryllium	0.0020	0.0020	0.002000	0	99.0	50	150			J
Boron	0.040	0.040	0.04000	0	99.9	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	89.2	50	150			J
Chromium	0.0059	0.0060	0.006000	0	99.0	50	150			J
Cobalt	0.0061	0.0060	0.006000	0	101	50	150			
Copper	0.0062	0.0060	0.006000	0	103	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0078	0.0080	0.008000	0	97.2	50	150			J
Nickel	0.0071	0.010	0.005000	0	142	50	150			J
Silver	0.0045	0.0050	0.005000	0	89.1	50	150			J
Zinc	0.0095	0.010	0.01000	0	95.4	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A62788** RunNo: **62788**

Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	105	85	115			
Barium	0.48	0.0020	0.5000	0	96.1	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.8	85	115			
Boron	0.51	0.040	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **A62788** RunNo: **62788**

Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.49	0.020	0.5000	0	98.1	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.1	85	115			
Nickel	0.48	0.010	0.5000	0	95.5	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.49	0.010	0.5000	0	98.3	85	115			

Sample ID: **1908C74-004FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-32** Batch ID: **47250** RunNo: **62788**

Prep Date: **9/3/2019** Analysis Date: **9/9/2019** SeqNo: **2139090** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.56	0.0020	0.5000	0.07575	95.9	70	130			
Beryllium	0.52	0.0020	0.5000	0	103	70	130			
Nickel	0.47	0.010	0.5000	0.006195	93.5	70	130			
Zinc	0.52	0.010	0.5000	0.005885	102	70	130			

Sample ID: **1908C74-004FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **MKTF-32** Batch ID: **47250** RunNo: **62788**

Prep Date: **9/3/2019** Analysis Date: **9/9/2019** SeqNo: **2139094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0.07575	94.4	70	130	1.41	20	
Beryllium	0.51	0.0020	0.5000	0	102	70	130	1.43	20	
Nickel	0.47	0.010	0.5000	0.006195	91.9	70	130	1.66	20	
Zinc	0.50	0.010	0.5000	0.005885	98.9	70	130	3.52	20	

Sample ID: **MB-47376** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **47376** RunNo: **62874**

Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142401** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-47376** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **47376** RunNo: **62874**

Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142402** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LLLCS-47376**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142402** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.039	0.040	0.04000	0	97.2	50	150			J

Sample ID: **LCS-47376**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **A62788** RunNo: **62788**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A62788** RunNo: **62788**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	107	50	150			J
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Beryllium	0.0020	0.0020	0.002000	0	99.0	50	150			J
Boron	0.040	0.040	0.04000	0	99.9	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	89.2	50	150			J
Chromium	0.0059	0.0060	0.006000	0	99.0	50	150			J
Cobalt	0.0061	0.0060	0.006000	0	101	50	150			
Copper	0.0062	0.0060	0.006000	0	103	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Molybdenum	0.0078	0.0080	0.008000	0	97.2	50	150			J
Nickel	0.0071	0.010	0.005000	0	142	50	150			J
Silver	0.0045	0.0050	0.005000	0	89.1	50	150			J
Zinc	0.0095	0.010	0.01000	0	95.4	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A62788** RunNo: **62788**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139053** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62788**	RunNo: **62788**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139053** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	105	85	115			
Barium	0.48	0.0020	0.5000	0	96.1	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.8	85	115			
Boron	0.51	0.040	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.49	0.020	0.5000	0	98.1	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Molybdenum	0.49	0.0080	0.5000	0	98.1	85	115			
Nickel	0.48	0.010	0.5000	0	95.5	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.49	0.010	0.5000	0	98.3	85	115			

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145669** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LLLCS-B** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0094	0.020	0.01000	0	93.8	50	150			J
Barium	0.0021	0.0020	0.002000	0	106	50	150			
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	0.55	1.0	0.5000	0	110	50	150			J
Chromium	0.0063	0.0060	0.006000	0	104	50	150			
Cobalt	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0060	0.0060	0.006000	0	99.6	50	150			J
Iron	0.020	0.020	0.02000	0	99.2	50	150			J
Magnesium	0.53	1.0	0.5000	0	105	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0092	0.0080	0.008000	0	115	50	150			
Nickel	0.0067	0.010	0.005000	0	134	50	150			J
Potassium	0.40	1.0	0.5000	0	79.6	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Sodium	0.55	1.0	0.5000	0	111	50	150			J
Zinc	0.013	0.010	0.01000	0	128	50	150			

Sample ID: **LCS-B** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **B62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	97.7	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.0	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.48	0.010	0.5000	0	96.1	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Sample ID: **1908C74-001EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-38**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145747** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	111	70	130			
Barium	0.50	0.0020	0.5000	0.02736	94.4	70	130			
Beryllium	0.49	0.0020	0.5000	0	98.7	70	130			
Cadmium	0.49	0.0020	0.5000	0	99.0	70	130			
Chromium	0.48	0.0060	0.5000	0	95.1	70	130			
Cobalt	0.46	0.0060	0.5000	0	92.6	70	130			
Copper	0.51	0.0060	0.5000	0.004772	102	70	130			
Iron	0.48	0.020	0.5000	0	95.9	70	130			
Magnesium	80	1.0	50.00	32.40	95.7	70	130			
Molybdenum	0.47	0.0080	0.5000	0	94.4	70	130			
Nickel	0.47	0.010	0.5000	0.007588	93.3	70	130			
Potassium	49	1.0	50.00	0.4535	96.9	70	130			
Silver	0.093	0.0050	0.1000	0.002836	90.4	70	130			
Zinc	0.48	0.010	0.5000	0.004415	95.8	70	130			

Sample ID: **1908C74-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-38**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145748** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	112	70	130	0.554	20	
Barium	0.50	0.0020	0.5000	0.02736	94.0	70	130	0.356	20	
Beryllium	0.49	0.0020	0.5000	0	98.9	70	130	0.208	20	
Cadmium	0.49	0.0020	0.5000	0	98.5	70	130	0.500	20	
Chromium	0.48	0.0060	0.5000	0	95.4	70	130	0.233	20	
Cobalt	0.46	0.0060	0.5000	0	92.5	70	130	0.130	20	
Copper	0.51	0.0060	0.5000	0.004772	102	70	130	0.0574	20	
Iron	0.49	0.020	0.5000	0	97.5	70	130	1.65	20	
Magnesium	80	1.0	50.00	32.40	95.4	70	130	0.147	20	
Molybdenum	0.48	0.0080	0.5000	0	95.2	70	130	0.858	20	
Nickel	0.47	0.010	0.5000	0.007588	93.1	70	130	0.256	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **1908C74-001EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-38** Batch ID: **B62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145748** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	49	1.0	50.00	0.4535	96.7	70	130	0.206	20	
Silver	0.093	0.0050	0.1000	0.002836	90.6	70	130	0.186	20	
Zinc	0.49	0.010	0.5000	0.004415	96.2	70	130	0.409	20	

Sample ID: **1908C74-007EMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB-2** Batch ID: **B62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145770** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	70	130			
Barium	0.48	0.0020	0.5000	0	96.6	70	130			
Beryllium	0.50	0.0020	0.5000	0	100	70	130			
Boron	0.51	0.040	0.5000	0.01021	101	70	130			
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Calcium	49	1.0	50.00	0	98.5	70	130			
Chromium	0.49	0.0060	0.5000	0	98.4	70	130			
Cobalt	0.48	0.0060	0.5000	0	96.6	70	130			
Copper	0.49	0.0060	0.5000	0	98.7	70	130			
Iron	0.48	0.020	0.5000	0	95.9	70	130			
Magnesium	49	1.0	50.00	0	97.5	70	130			
Manganese	0.49	0.0020	0.5000	0	97.5	70	130			
Molybdenum	0.47	0.0080	0.5000	0	94.4	70	130			
Nickel	0.49	0.010	0.5000	0	97.3	70	130			
Potassium	48	1.0	50.00	0	97.0	70	130			
Silver	0.099	0.0050	0.1000	0	99.4	70	130			
Sodium	50	1.0	50.00	0	99.6	70	130			
Zinc	0.51	0.010	0.5000	0.007885	99.6	70	130			

Sample ID: **1908C74-007EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB-2** Batch ID: **B62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	107	70	130	0.470	20	
Barium	0.49	0.0020	0.5000	0	97.7	70	130	1.12	20	
Beryllium	0.51	0.0020	0.5000	0	101	70	130	0.554	20	
Boron	0.52	0.040	0.5000	0.01021	102	70	130	0.944	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	1.27	20	
Calcium	50	1.0	50.00	0	99.8	70	130	1.34	20	
Chromium	0.50	0.0060	0.5000	0	99.5	70	130	1.15	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **1908C74-007EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB-2** Batch ID: **B62943** RunNo: **62943**
Prep Date: Analysis Date: **9/14/2019** SeqNo: **2145771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.49	0.0060	0.5000	0	98.0	70	130	1.46	20	
Copper	0.49	0.0060	0.5000	0	98.6	70	130	0.117	20	
Iron	0.49	0.020	0.5000	0	98.7	70	130	2.82	20	
Magnesium	49	1.0	50.00	0	97.9	70	130	0.442	20	
Manganese	0.49	0.0020	0.5000	0	98.0	70	130	0.503	20	
Molybdenum	0.48	0.0080	0.5000	0	95.8	70	130	1.46	20	
Nickel	0.49	0.010	0.5000	0	99.0	70	130	1.69	20	
Potassium	49	1.0	50.00	0	97.2	70	130	0.215	20	
Silver	0.10	0.0050	0.1000	0	100	70	130	0.617	20	
Sodium	50	1.0	50.00	0	100	70	130	0.891	20	
Zinc	0.51	0.010	0.5000	0.007885	101	70	130	1.75	20	

Sample ID: **MB-A** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **A62967** RunNo: **62967**
Prep Date: Analysis Date: **9/16/2019** SeqNo: **2146091** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								
Calcium	ND	1.0								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID: **LLLCS-A** SampType: **LCSLL** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A62967** RunNo: **62967**
Prep Date: Analysis Date: **9/16/2019** SeqNo: **2146092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.039	0.040	0.04000	0	98.7	50	150			J
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Manganese	0.0020	0.0020	0.002000	0	97.9	50	150			J
Sodium	0.46	1.0	0.5000	0	92.9	50	150			J

Sample ID: **LCS-A** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A62967** RunNo: **62967**
Prep Date: Analysis Date: **9/16/2019** SeqNo: **2146093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.6	85	115			
Calcium	50	1.0	50.00	0	99.1	85	115			
Manganese	0.48	0.0020	0.5000	0	96.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.4	85	115			

Sample ID: **1908C74-001EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-38**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146163** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	3.1	0.20	2.500	0.5300	103	70	130			
Calcium	430	5.0	250.0	176.8	101	70	130			
Manganese	4.8	0.010	2.500	2.351	98.7	70	130			

Sample ID: **1908C74-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-38**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146167** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	3.1	0.20	2.500	0.5300	102	70	130	0.787	20	
Calcium	430	5.0	250.0	176.8	99.5	70	130	0.667	20	
Manganese	4.8	0.010	2.500	2.351	97.9	70	130	0.375	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **B62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00053	0.0010								J
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **B62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133279** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0011	0.0010	0.001000	0	108	50	150			
Arsenic	0.0010	0.0010	0.001000	0	99.9	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.8	50	150			J
Selenium	0.00097	0.0010	0.001000	0	96.9	50	150			J
Thallium	0.00046	0.00050	0.0005000	0	92.9	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.7	50	150			J

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **B62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.0	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.6	85	115			
Lead	0.012	0.00050	0.01250	0	92.7	85	115			
Selenium	0.023	0.0010	0.02500	0	92.2	85	115			
Thallium	0.012	0.00050	0.01250	0	94.1	85	115			
Uranium	0.012	0.00050	0.01250	0	94.2	85	115			

Sample ID: **MB-47250** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135602** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47250** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135602** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-47250** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135604** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00088	0.0010	0.001000	0	88.1	50	150			J
Arsenic	0.0011	0.0010	0.001000	0	110	50	150			
Lead	0.00052	0.00050	0.0005000	0	104	50	150			
Selenium	0.0010	0.0010	0.001000	0	104	50	150			
Thallium	0.00044	0.00050	0.0005000	0	87.8	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **MSLCS-47250** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135606** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	108	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Lead	0.012	0.00050	0.01250	0	99.0	85	115			
Selenium	0.024	0.0010	0.02500	0	94.5	85	115			
Thallium	0.012	0.00050	0.01250	0	97.5	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID: **1908C74-001FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **MKTF-38** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	104	70	130			
Arsenic	0.027	0.0010	0.02500	0.0006767	105	70	130			
Lead	0.013	0.00050	0.01250	0.0008270	95.5	70	130			
Selenium	0.026	0.0010	0.02500	0.002803	93.7	70	130			
Thallium	0.012	0.00050	0.01250	0	94.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **1908C74-001FMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**

Client ID: **MKTF-38** Batch ID: **47250** RunNo: **62715**

Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135638** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	102	70	130	2.67	20	
Arsenic	0.027	0.0010	0.02500	0.0006767	103	70	130	1.60	20	
Lead	0.013	0.00050	0.01250	0.0008270	93.6	70	130	1.85	20	
Selenium	0.026	0.0010	0.02500	0.002803	91.8	70	130	1.84	20	
Thallium	0.012	0.00050	0.01250	0	94.6	70	130	0.263	20	

Sample ID: **1908C74-001FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**

Client ID: **MKTF-38** Batch ID: **47250** RunNo: **62715**

Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.033	0.0025	0.01250	0.02003	100	70	130			

Sample ID: **1908C74-001FMSDL** SampType: **MSDLL** TestCode: **EPA 200.8: Metals**

Client ID: **MKTF-38** Batch ID: **47250** RunNo: **62715**

Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.033	0.0025	0.01250	0.02003	104	70	130	1.31	20	

Sample ID: **1908C74-002FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**

Client ID: **DUP-082019-1** Batch ID: **47250** RunNo: **63023**

Prep Date: **9/3/2019** Analysis Date: **9/18/2019** SeqNo: **2149202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0050	0.02500	0	100	70	130			
Arsenic	0.026	0.0050	0.02500	0	103	70	130			
Lead	0.015	0.0025	0.01250	0.002504	97.1	70	130			
Selenium	0.029	0.0050	0.02500	0	114	70	130			
Thallium	0.012	0.0025	0.01250	0	98.5	70	130			
Uranium	0.013	0.0025	0.01250	0.0006346	100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **A62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0010	0.0010	0.001000	0	101	50	150			
Arsenic	0.00096	0.0010	0.001000	0	96.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.5	50	150			J
Selenium	0.00086	0.0010	0.001000	0	85.7	50	150			J
Thallium	0.00047	0.00050	0.0005000	0	94.7	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **A62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133217** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	94.8	85	115			
Arsenic	0.024	0.0010	0.02500	0	95.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.7	85	115			
Selenium	0.022	0.0010	0.02500	0	89.8	85	115			
Thallium	0.012	0.00050	0.01250	0	96.0	85	115			
Uranium	0.012	0.00050	0.01250	0	95.7	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **A62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133275** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133308** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133308** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133311** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.7	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.0	50	150			J
Selenium	0.0012	0.0010	0.001000	0	123	50	150			
Thallium	0.00048	0.00050	0.0005000	0	95.2	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	85	115			
Lead	0.012	0.00050	0.01250	0	97.5	85	115			
Selenium	0.024	0.0010	0.02500	0	95.7	85	115			
Thallium	0.012	0.00050	0.01250	0	97.4	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139237** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010								J

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0012	0.0010	0.001000	0	119	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139239** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47375**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **PBW**	Batch ID: **47375**	RunNo: **62816**							
Prep Date: **9/10/2019**	Analysis Date: **9/10/2019**	SeqNo: **2140381**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-47375**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **LCSW**	Batch ID: **47375**	RunNo: **62816**							
Prep Date: **9/10/2019**	Analysis Date: **9/10/2019**	SeqNo: **2140382**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.4	80	120			

Sample ID: **1908C74-002FMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **DUP-082019-1**	Batch ID: **47375**	RunNo: **62816**							
Prep Date: **9/10/2019**	Analysis Date: **9/11/2019**	SeqNo: **2140425**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0037	0.0010	0.005000	0	73.8	75	125			S

Sample ID: **1908C74-002FMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**							
Client ID: **DUP-082019-1**	Batch ID: **47375**	RunNo: **62816**							
Prep Date: **9/10/2019**	Analysis Date: **9/11/2019**	SeqNo: **2140426**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0038	0.0010	0.005000	0	75.8	75	125	2.65	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **A62337** RunNo: **62337**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2118502** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **A62337** RunNo: **62337**
Prep Date: Analysis Date: **8/21/2019** SeqNo: **2118503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	101	90	110			
Chloride	4.8	0.50	5.000	0	95.0	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.2	90	110			
Bromide	2.4	0.10	2.500	0	97.1	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.4	90	110			
Sulfate	9.7	0.50	10.00	0	96.7	90	110			

Sample ID: **1908C74-001DMS** SampType: **ms** TestCode: **EPA Method 300.0: Anions**
Client ID: **MKTF-38** Batch ID: **A62337** RunNo: **62337**
Prep Date: Analysis Date: **8/22/2019** SeqNo: **2118561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.3	0.50	2.500	0.9258	94.6	61.6	129			
Nitrogen, Nitrite (As N)	4.1	0.50	5.000	0	81.1	53.4	119			
Bromide	12	0.50	12.50	0.5224	95.1	81.9	109			
Nitrogen, Nitrate (As N)	18	0.50	12.50	5.451	103	87.9	118			
Phosphorus, Orthophosphate (As P	22	2.5	25.00	0	88.1	75.6	113			

Sample ID: **1908C74-001DMSD** SampType: **msd** TestCode: **EPA Method 300.0: Anions**
Client ID: **MKTF-38** Batch ID: **A62337** RunNo: **62337**
Prep Date: Analysis Date: **8/22/2019** SeqNo: **2118562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	3.3	0.50	2.500	0.9258	96.7	61.6	129	1.58	20	
Nitrogen, Nitrite (As N)	4.0	0.50	5.000	0	80.7	53.4	119	0.436	20	
Bromide	12	0.50	12.50	0.5224	94.3	81.9	109	0.864	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **1908C74-001DMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **MKTF-38**	Batch ID: **A62337**	RunNo: **62337**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2118562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	19	0.50	12.50	5.451	105	87.9	118	1.26	20	
Phosphorus, Orthophosphate (As P	22	2.5	25.00	0	88.2	75.6	113	0.100	20	

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62379**	RunNo: **62379**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2120253** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62379**	RunNo: **62379**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2120254** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	105	90	110			
Chloride	4.9	0.50	5.000	0	97.3	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.2	90	110			
Bromide	2.5	0.10	2.500	0	99.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.4	90	110			
Sulfate	9.8	0.50	10.00	0	98.2	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62729**	RunNo: **62729**
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136191** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R62729**	RunNo: **62729**							
Prep Date:	Analysis Date: **9/6/2019**	SeqNo: **2136192**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	97.0	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47119**	SampType: **MBLK**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **PBW**	Batch ID: **47119**	RunNo: **62499**
Prep Date: **8/28/2019**	Analysis Date: **8/28/2019**	SeqNo: **2126363** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: **LCS-47119**	SampType: **LCS**	TestCode: **EPA Method 8011/504.1: EDB**
Client ID: **LCSW**	Batch ID: **47119**	RunNo: **62499**
Prep Date: **8/28/2019**	Analysis Date: **8/28/2019**	SeqNo: **2126365** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **MB-47020**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **47020**	RunNo: **62411**
Prep Date: **8/23/2019**	Analysis Date: **8/26/2019**	SeqNo: **2122349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.86		1.000		85.7	70	130			

Sample ID: **1908C74-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-38**	Batch ID: **47020**	RunNo: **62414**
Prep Date: **8/23/2019**	Analysis Date: **8/26/2019**	SeqNo: **2122413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	68.1	137			
Surr: DNOP	0.54		0.5000		108	70	130			

Sample ID: **1908C74-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-38**	Batch ID: **47020**	RunNo: **62414**
Prep Date: **8/23/2019**	Analysis Date: **8/26/2019**	SeqNo: **2122414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	68.1	137	2.72	20	
Surr: DNOP	0.55		0.5000		110	70	130	0	0	

Sample ID: **LCS-47020**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **47020**	RunNo: **62439**
Prep Date: **8/23/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	111	71.8	135			
Surr: DNOP	0.57		0.5000		114	70	130			

Sample ID: **MB-47079**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **47079**	RunNo: **62439**
Prep Date: **8/27/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123592** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	1.2		1.000		118	70	130			

Sample ID: **LCS-47079**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **47079**	RunNo: **62439**
Prep Date: **8/27/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123593** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-47079**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **47079**	RunNo: **62439**
Prep Date: **8/27/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123593** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	0.47		0.5000		94.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R62400** RunNo: **62400**
Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121087** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Chlorobenzene	22	1.0	20.00	0	108	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.6	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R62400** RunNo: **62400**
Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	0.22	1.0								J
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	0.38	1.0								J
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	1.3	3.0								J
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.24	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PBW** Batch ID: **R62400** RunNo: **62400**

Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121088** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.7	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **1908c74-002ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **DUP-082019-1** Batch ID: **R62400** RunNo: **62400**

Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121095** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	10	200.0	9.346	99.2	70	130			
Toluene	200	10	200.0	0	102	70	130			
Chlorobenzene	210	10	200.0	0	103	70	130			
1,1-Dichloroethene	180	10	200.0	0	91.4	67.6	130			
Trichloroethene (TCE)	190	10	200.0	0	94.1	70	130			
Surr: 1,2-Dichloroethane-d4	100		100.0		99.6	70	130			
Surr: 4-Bromofluorobenzene	97		100.0		96.7	70	130			
Surr: Dibromofluoromethane	99		100.0		98.7	70	130			
Surr: Toluene-d8	98		100.0		98.4	70	130			

Sample ID: **1908c74-002amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **DUP-082019-1** Batch ID: **R62400** RunNo: **62400**

Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121096** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	200	10	200.0	9.346	93.1	70	130	6.01	20	
Toluene	200	10	200.0	0	99.7	70	130	2.59	20	
Chlorobenzene	200	10	200.0	0	102	70	130	1.24	20	
1,1-Dichloroethene	170	10	200.0	0	85.3	67.6	130	6.90	20	
Trichloroethene (TCE)	180	10	200.0	0	89.3	70	130	5.32	20	
Surr: 1,2-Dichloroethane-d4	96		100.0		95.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	100		100.0		103	70	130	0	0	
Surr: Dibromofluoromethane	98		100.0		97.8	70	130	0	0	
Surr: Toluene-d8	99		100.0		99.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R62427** RunNo: **62427**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2122329** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.0	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	88.2	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	97.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	9.8		10.00		98.5	70	130			

Sample ID: **1908c74-002ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **DUP-082019-1** Batch ID: **R62427** RunNo: **62427**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2122342** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	110	5.0	100.0	9.486	101	70	130			
Toluene	100	5.0	100.0	0	105	70	130			
Chlorobenzene	100	5.0	100.0	0	105	70	130			
1,1-Dichloroethene	90	5.0	100.0	0	90.0	70	130			
Trichloroethene (TCE)	100	5.0	100.0	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	50		50.00		100	70	130			
Surr: 4-Bromofluorobenzene	49		50.00		98.7	70	130			
Surr: Dibromofluoromethane	50		50.00		99.5	70	130			
Surr: Toluene-d8	50		50.00		101	70	130			

Sample ID: **1908c74-002amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **DUP-082019-1** Batch ID: **R62427** RunNo: **62427**

Prep Date: Analysis Date: **8/26/2019** SeqNo: **2122343** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	110	5.0	100.0	9.486	100	70	130	0.875	20	
Toluene	100	5.0	100.0	0	100	70	130	4.12	20	
Chlorobenzene	100	5.0	100.0	0	104	70	130	0.101	20	
1,1-Dichloroethene	85	5.0	100.0	0	84.5	70	130	6.29	20	
Trichloroethene (TCE)	94	5.0	100.0	0	93.8	70	130	6.91	20	
Surr: 1,2-Dichloroethane-d4	51		50.00		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	47		50.00		93.8	70	130	0	0	
Surr: Dibromofluoromethane	51		50.00		101	70	130	0	0	
Surr: Toluene-d8	50		50.00		100	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62427**	RunNo: **62427**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122372** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R62427**	RunNo: **62427**	
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122372**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.23	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **LCS-47000** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **47000** RunNo: **62456**
Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	9.4	10	20.00	0	47.0	32.2	94			J
4-Chloro-3-methylphenol	21	10	40.00	0	51.8	37.7	101			
2-Chlorophenol	21	10	40.00	0	51.7	32.6	90.1			
1,4-Dichlorobenzene	11	10	20.00	0	53.7	30	87.2			
2,4-Dinitrotoluene	7.7	10	20.00	0	38.7	35.9	85.8			J
N-Nitrosodi-n-propylamine	12	10	20.00	0	58.2	37.1	108			
4-Nitrophenol	20	10	40.00	0	50.4	22.4	86.6			
Pentachlorophenol	16	20	40.00	0	38.9	31.6	91			J
Phenol	22	10	40.00	0	56.1	21.7	84.9			
Pyrene	9.5	10	20.00	0	47.6	46.3	103			J
1,2,4-Trichlorobenzene	11	10	20.00	0	53.9	30.2	88.3			
Surr: 2-Fluorophenol	130		200.0		65.1	15	101			
Surr: Phenol-d5	100		200.0		50.0	15	84.6			
Surr: 2,4,6-Tribromophenol	190		200.0		95.5	27.8	112			
Surr: Nitrobenzene-d5	95		100.0		94.9	33	113			
Surr: 2-Fluorobiphenyl	86		100.0		85.9	26.6	107			
Surr: 4-Terphenyl-d14	100		100.0		103	18.7	148			

Sample ID: **MB-47000** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **47000** RunNo: **62456**
Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123971** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47000** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **47000** RunNo: **62456**
Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123971** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **MB-47000**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **47000**	RunNo: **62456**
Prep Date: **8/23/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123971** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		64.6	15	101			
Surr: Phenol-d5	98		200.0		48.8	15	84.6			
Surr: 2,4,6-Tribromophenol	140		200.0		69.2	27.8	112			
Surr: Nitrobenzene-d5	85		100.0		85.1	33	113			
Surr: 2-Fluorobiphenyl	73		100.0		73.1	26.6	107			
Surr: 4-Terphenyl-d14	78		100.0		78.4	18.7	148			

Sample ID: **lcsd-47000**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **47000**	RunNo: **62473**
Prep Date: **8/23/2019**	Analysis Date: **8/28/2019**	SeqNo: **2125061** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	15	10	20.00	0	74.8	32.2	94	45.6	32.9	R
4-Chloro-3-methylphenol	32	10	40.00	0	79.6	37.7	101	42.3	29.9	R
2-Chlorophenol	33	10	40.00	0	83.2	32.6	90.1	46.6	28.5	R
1,4-Dichlorobenzene	15	10	20.00	0	76.1	15	87.2	34.5	44.9	
2,4-Dinitrotoluene	13	10	20.00	0	63.5	35.9	85.8	48.5	28.5	R
N-Nitrosodi-n-propylamine	16	10	20.00	0	80.9	37.1	108	32.6	29.9	R
4-Nitrophenol	28	10	40.00	0	70.2	15	86.6	32.9	68	
Pentachlorophenol	24	20	40.00	0	59.2	31.6	91	41.4	39.5	R
Phenol	34	10	40.00	0	86.2	15	84.9	42.3	44.2	S
Pyrene	13	10	20.00	0	67.2	46.3	103	34.1	23.8	R
1,2,4-Trichlorobenzene	15	10	20.00	0	75.6	15.7	88.3	33.5	38	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **lcsd-47000** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **47000** RunNo: **62473**
Prep Date: **8/23/2019** Analysis Date: **8/28/2019** SeqNo: **2125061** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	88		200.0		44.0	15	101	0	0	
Surr: Phenol-d5	74		200.0		37.1	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		73.5	27.8	112	0	0	
Surr: Nitrobenzene-d5	67		100.0		67.0	33	113	0	0	
Surr: 2-Fluorobiphenyl	59		100.0		59.0	26.6	107	0	0	
Surr: 4-Terphenyl-d14	83		100.0		83.3	18.7	148	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**

26-Sep-19

Client: Andeavor, Gallup

Project: 2019 Annual GW Sampling

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121104** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	96.1	70	130			
Surr: BFB	9.9		10.00		99.4	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121105** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		100	70	130			

Sample ID: **1908C74-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-38**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121114** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.4	70	130			
Surr: BFB	9.5		10.00		94.9	70	130			

Sample ID: **1908C74-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-38**	Batch ID: **G62400**	RunNo: **62400**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121115** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.43	0.050	0.5000	0	86.0	70	130	8.25	20	
Surr: BFB	9.4		10.00		94.3	70	130	0	0	

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G62427**	RunNo: **62427**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.1	70	130			
Surr: BFB	9.8		10.00		98.0	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G62427**	RunNo: **62427**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908C74**
26-Sep-19

Client: Andeavor, Gallup
Project: 2019 Annual GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G62427**	RunNo: **62427**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.9		10.00		99.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1908C74** RcptNo: 1

Received By: **Desiree Dominguez** **8/21/2019 4:50:00 PM**

Completed By: **Leah Baca** **8/22/2019 12:10:46 PM**

Reviewed By: 8/22/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 21
(<2 or >12 unless noted)
Adjusted? NO
Checked by: DAD 8/22/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Yes			
2	5.8	Good	Yes			
3	6.6	Good	Yes			
4	55	Good	Yes			

Chain-of-Custody Record

Client: Western

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☑ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: 2019 Annual GW Sampling

Project #: MKTF Wells

Project Manager: Brian Moore

Sampler: PH/VW

On Ice: ☑ Yes ☐ No

Sample Temperature: 4 DAP 8/21/19 See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1908074	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Cations	Metals (Tot + Diss)			Air Bubbles (Y or N)
8/20/19	1512	W	MKTF-38	Misc.	Misc.	-001			X		X	X		X		X		X	X			
8/20/19	—	W	DUP-082019-1	Misc.	Misc.	-002			X			X		X		X		X	X			
8/20/19	1651	W	MKTF-39	Misc.	Misc.	-003			X			X		X		X		X	X			
8/20/19	1341	W	MKTF-32	Misc.	Misc.	-004			X		X	X		X		X		X	X			
8/21/19	1030	W	MKTF-4	Misc.	Misc.	-005			X		X	X		X		X		X	X			
8/21/19	—	W	DUP-20190821-1	Misc.	Misc.	-006			X		X	X		X		X		X	X			
8/21/19	1215	W	EB-2	Misc	Misc.	-007			X		X	X		X		X		X	X			
8/21/19	1230	W	Trip Blank	40mL vor	HCl	-008										X						

Date	Time	Relinquished by:	Received by:	Date	Time
8/21/19	1230			8/21	1400
8/21/19	1650		CDO	8/21/19	16:50

Remarks: 4.7+0.2 = 4.9°c
5.6+0.2 = 5.8°c
6.4+0.2 = 6.6°c
5.3+0.2 = 5.5°c

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 26, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 GW Annual OrderNo.: 1908D36

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/21/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:36:00 PM
Lab ID: 1908D36-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	8.4	0.35	1.0		mg/L	1	8/26/2019 4:31:56 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 4:31:56 PM	47020
Surr: DNOP	121	0	70-130		%Rec	1	8/26/2019 4:31:56 PM	47020
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	26	0.42	1.0		mg/L	20	8/26/2019 3:29:13 PM	A62420
Surr: BFB	114	0	65.8-143		%Rec	20	8/26/2019 3:29:13 PM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.11	0.073	0.50	J	mg/L	5	8/22/2019 10:19:47 PM	R62379
Chloride	140	10	10		mg/L	20	8/22/2019 10:32:39 PM	R62379
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/22/2019 10:19:47 PM	R62379
Bromide	2.1	0.089	0.50		mg/L	5	8/22/2019 10:19:47 PM	R62379
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/22/2019 10:19:47 PM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 10:19:47 PM	R62379
Sulfate	ND	0.33	2.5		mg/L	5	8/22/2019 10:19:47 PM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.025	0.0025	0.020		mg/L	1	9/14/2019 12:02:36 PM	B62943
Barium	3.8	0.0032	0.010	*	mg/L	5	9/14/2019 12:04:33 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:02:36 PM	B62943
Boron	0.29	0.0045	0.040		mg/L	1	9/14/2019 12:02:36 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:02:36 PM	B62943
Calcium	120	0.31	5.0		mg/L	5	9/14/2019 12:04:33 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:02:36 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 12:02:36 PM	B62943
Copper	0.0026	0.0013	0.0060	J	mg/L	1	9/14/2019 12:02:36 PM	B62943
Iron	4.1	0.044	0.10	*	mg/L	5	9/14/2019 12:04:33 PM	B62943
Magnesium	17	0.050	1.0		mg/L	1	9/14/2019 12:02:36 PM	B62943
Manganese	2.2	0.0014	0.010	*	mg/L	5	9/14/2019 12:04:33 PM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 12:02:36 PM	B62943
Nickel	0.082	0.0040	0.010		mg/L	1	9/14/2019 12:02:36 PM	B62943
Potassium	0.94	0.16	1.0	J	mg/L	1	9/14/2019 12:02:36 PM	B62943
Silver	0.0020	0.00094	0.0050	J	mg/L	1	9/14/2019 12:02:36 PM	B62943
Sodium	280	2.1	5.0		mg/L	5	9/14/2019 12:04:33 PM	B62943
Zinc	0.0068	0.0023	0.010	J	mg/L	1	9/14/2019 12:02:36 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	13	0.12	1.0	*	mg/L	50	9/9/2019 3:43:06 PM	47250
Barium	4.4	0.0032	0.010	*	mg/L	5	9/9/2019 3:40:59 PM	47250
Beryllium	0.00077	0.00028	0.0020	J	mg/L	1	9/9/2019 3:39:03 PM	47250

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:36:00 PM
Lab ID: 1908D36-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Boron	0.28	0.0045	0.040		mg/L	1	9/12/2019 9:25:40 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 8:15:33 PM	47250
Chromium	0.0050	0.0015	0.0060	J	mg/L	1	9/9/2019 3:39:03 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 3:39:03 PM	47250
Copper	0.0082	0.0041	0.0060		mg/L	1	9/4/2019 8:15:33 PM	47250
Iron	10	0.44	1.0	*	mg/L	50	9/9/2019 3:43:06 PM	47250
Manganese	3.8	0.0014	0.010	*	mg/L	5	9/9/2019 3:40:59 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 8:15:33 PM	47250
Nickel	0.090	0.020	0.050		mg/L	5	9/9/2019 3:40:59 PM	47250
Silver	0.0015	0.0014	0.0050	J	mg/L	1	9/4/2019 8:15:33 PM	47250
Zinc	ND	0.029	0.050		mg/L	5	9/9/2019 3:40:59 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:07:08 PM	A62791
Arsenic	0.0037	0.00010	0.0010		mg/L	1	9/4/2019 5:46:18 PM	C62654
Lead	0.000071	0.000055	0.00050	J	mg/L	1	9/4/2019 5:46:18 PM	C62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 5:46:18 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 5:46:18 PM	C62654
Uranium	0.00026	0.000075	0.00050	J	mg/L	1	9/4/2019 5:46:18 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:17:48 PM	47250
Arsenic	0.0051	0.00031	0.0010		mg/L	1	9/5/2019 4:17:48 PM	47250
Lead	0.0070	0.000055	0.00050		mg/L	1	9/5/2019 4:17:48 PM	47250
Selenium	0.0030	0.00048	0.0010		mg/L	1	9/5/2019 4:17:48 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 4:17:48 PM	47250
Uranium	0.00092	0.000085	0.00050		mg/L	1	9/5/2019 4:17:48 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:18:52 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 1:35:03 PM	47000

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:36:00 PM
Lab ID: 1908D36-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 1:35:03 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 1:35:03 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Carbazole	5.0	2.9	10	J	µg/L	1	8/28/2019 1:35:03 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 1:35:03 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 1:35:03 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 1:35:03 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 1:35:03 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 1:35:03 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 1:35:03 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 1:35:03 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Fluorene	3.9	2.9	10	J	µg/L	1	8/28/2019 1:35:03 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 1:35:03 PM	47000

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:36:00 PM
Lab ID: 1908D36-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
1-Methylnaphthalene	110	3.1	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2-Methylnaphthalene	47	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 1:35:03 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 1:35:03 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 1:35:03 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Naphthalene	110	4.1	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 1:35:03 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 1:35:03 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 1:35:03 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Phenol	29	8.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 1:35:03 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 1:35:03 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 1:35:03 PM	47000
Surr: 2-Fluorophenol	34.1	0	15-101		%Rec	1	8/28/2019 1:35:03 PM	47000
Surr: Phenol-d5	25.0	0	15-84.6		%Rec	1	8/28/2019 1:35:03 PM	47000
Surr: 2,4,6-Tribromophenol	54.5	0	27.8-112		%Rec	1	8/28/2019 1:35:03 PM	47000
Surr: Nitrobenzene-d5	70.5	0	33-113		%Rec	1	8/28/2019 1:35:03 PM	47000
Surr: 2-Fluorobiphenyl	61.2	0	26.6-107		%Rec	1	8/28/2019 1:35:03 PM	47000
Surr: 4-Terphenyl-d14	72.7	0	18.7-148		%Rec	1	8/28/2019 1:35:03 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	12000	33	200		µg/L	200	8/26/2019 7:25:00 PM	R62416
Toluene	91	7.0	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Ethylbenzene	560	2.6	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Methyl tert-butyl ether (MTBE)	100	9.1	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2,4-Trimethylbenzene	ND	4.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,3,5-Trimethylbenzene	ND	3.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2-Dichloroethane (EDC)	ND	3.9	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2-Dibromoethane (EDB)	ND	3.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Naphthalene	150	5.5	40		µg/L	20	8/26/2019 7:49:00 PM	R62416

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:36:00 PM
Lab ID: 1908D36-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	110	6.3	80		µg/L	20	8/26/2019 7:49:00 PM	R62416
2-Methylnaphthalene	63	6.9	80	J	µg/L	20	8/26/2019 7:49:00 PM	R62416
Acetone	ND	24	200		µg/L	20	8/26/2019 7:49:00 PM	R62416
Bromobenzene	ND	4.9	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Bromodichloromethane	ND	2.7	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Bromoform	ND	5.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Bromomethane	ND	5.5	60		µg/L	20	8/26/2019 7:49:00 PM	R62416
2-Butanone	ND	42	200		µg/L	20	8/26/2019 7:49:00 PM	R62416
Carbon disulfide	ND	9.1	200		µg/L	20	8/26/2019 7:49:00 PM	R62416
Carbon Tetrachloride	ND	2.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Chlorobenzene	ND	3.9	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Chloroethane	ND	3.6	40		µg/L	20	8/26/2019 7:49:00 PM	R62416
Chloroform	ND	2.4	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Chloromethane	ND	6.4	60		µg/L	20	8/26/2019 7:49:00 PM	R62416
2-Chlorotoluene	ND	4.9	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
4-Chlorotoluene	ND	4.7	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
cis-1,2-DCE	ND	3.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
cis-1,3-Dichloropropene	ND	2.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2-Dibromo-3-chloropropane	ND	6.5	40		µg/L	20	8/26/2019 7:49:00 PM	R62416
Dibromochloromethane	ND	4.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Dibromomethane	ND	4.2	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2-Dichlorobenzene	ND	5.9	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,3-Dichlorobenzene	ND	5.0	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,4-Dichlorobenzene	ND	5.9	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,1-Dichloroethane	ND	2.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,1-Dichloroethene	ND	4.1	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2-Dichloropropane	ND	4.2	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,3-Dichloropropane	ND	4.0	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
2,2-Dichloropropane	ND	4.7	40		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,1-Dichloropropene	ND	3.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Hexachlorobutadiene	ND	6.2	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
2-Hexanone	ND	31	200		µg/L	20	8/26/2019 7:49:00 PM	R62416
Isopropylbenzene	18	3.8	20	J	µg/L	20	8/26/2019 7:49:00 PM	R62416
4-Isopropyltoluene	ND	4.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
4-Methyl-2-pentanone	ND	14	200		µg/L	20	8/26/2019 7:49:00 PM	R62416
Methylene Chloride	ND	3.1	60		µg/L	20	8/26/2019 7:49:00 PM	R62416
n-Butylbenzene	20	4.6	60	J	µg/L	20	8/26/2019 7:49:00 PM	R62416
n-Propylbenzene	44	4.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-57
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:36:00 PM
Lab ID: 1908D36-001
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	5.8	5.0	20	J	µg/L	20	8/26/2019 7:49:00 PM	R62416
Styrene	ND	3.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
tert-Butylbenzene	ND	4.1	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,1,1,2-Tetrachloroethane	ND	4.1	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,1,2,2-Tetrachloroethane	ND	11	40		µg/L	20	8/26/2019 7:49:00 PM	R62416
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
trans-1,2-DCE	ND	3.6	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
trans-1,3-Dichloropropene	ND	3.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2,3-Trichlorobenzene	ND	6.0	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2,4-Trichlorobenzene	ND	3.9	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,1,1-Trichloroethane	ND	3.5	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,1,2-Trichloroethane	ND	4.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Trichloroethene (TCE)	ND	3.3	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Trichlorofluoromethane	ND	3.8	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
1,2,3-Trichloropropane	ND	5.9	40		µg/L	20	8/26/2019 7:49:00 PM	R62416
Vinyl chloride	ND	3.6	20		µg/L	20	8/26/2019 7:49:00 PM	R62416
Xylenes, Total	130	9.1	30		µg/L	20	8/26/2019 7:49:00 PM	R62416
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	20	8/26/2019 7:49:00 PM	R62416
Surr: 4-Bromofluorobenzene	98.1	0	70-130		%Rec	20	8/26/2019 7:49:00 PM	R62416
Surr: Dibromofluoromethane	102	0	70-130		%Rec	20	8/26/2019 7:49:00 PM	R62416
Surr: Toluene-d8	97.1	0	70-130		%Rec	20	8/26/2019 7:49:00 PM	R62416

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:02:00 PM
Lab ID: 1908D36-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	0.53	0.35	1.0	J	mg/L	1	8/26/2019 4:56:18 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 4:56:18 PM	47020
Surr: DNOP	117	0	70-130		%Rec	1	8/26/2019 4:56:18 PM	47020
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.25	0.021	0.050		mg/L	1	8/26/2019 4:38:38 PM	A62420
Surr: BFB	496	0	65.8-143	S	%Rec	1	8/26/2019 4:38:38 PM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.073	0.50		mg/L	5	8/22/2019 10:45:31 PM	R62379
Chloride	660	25	25		mg/L	50	8/28/2019 2:07:19 PM	R62484
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/22/2019 10:45:31 PM	R62379
Bromide	1.8	0.089	0.50		mg/L	5	8/22/2019 10:45:31 PM	R62379
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/22/2019 10:45:31 PM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 10:45:31 PM	R62379
Sulfate	21	0.33	2.5		mg/L	5	8/22/2019 10:45:31 PM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 12:08:46 PM	B62943
Barium	0.36	0.00065	0.0020		mg/L	1	9/14/2019 12:08:46 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:08:46 PM	B62943
Boron	0.57	0.0045	0.040		mg/L	1	9/14/2019 12:08:46 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:08:46 PM	B62943
Calcium	91	0.062	1.0		mg/L	1	9/14/2019 12:08:46 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:08:46 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 12:08:46 PM	B62943
Copper	0.0082	0.0013	0.0060		mg/L	1	9/14/2019 12:08:46 PM	B62943
Iron	0.011	0.0087	0.020	J	mg/L	1	9/14/2019 12:08:46 PM	B62943
Magnesium	17	0.050	1.0		mg/L	1	9/14/2019 12:08:46 PM	B62943
Manganese	0.068	0.00029	0.0020	*	mg/L	1	9/14/2019 12:08:46 PM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 12:08:46 PM	B62943
Nickel	0.078	0.0040	0.010		mg/L	1	9/14/2019 12:08:46 PM	B62943
Potassium	1.1	0.16	1.0		mg/L	1	9/14/2019 12:08:46 PM	B62943
Silver	0.0015	0.00094	0.0050	J	mg/L	1	9/14/2019 12:08:46 PM	B62943
Sodium	520	4.2	10		mg/L	10	9/14/2019 12:10:51 PM	B62943
Zinc	0.0098	0.0023	0.010	J	mg/L	1	9/14/2019 12:08:46 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	3.9	0.025	0.20	*	mg/L	10	9/9/2019 3:47:12 PM	47250
Barium	0.52	0.00065	0.0020		mg/L	1	9/9/2019 3:45:16 PM	47250
Beryllium	0.00072	0.00028	0.0020	J	mg/L	1	9/9/2019 3:45:16 PM	47250

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:02:00 PM
Lab ID: 1908D36-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Boron	0.58	0.0045	0.040		mg/L	1	9/12/2019 9:31:40 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 8:19:25 PM	47250
Chromium	0.0032	0.0015	0.0060	J	mg/L	1	9/9/2019 3:45:16 PM	47250
Cobalt	0.0033	0.0031	0.0060	J	mg/L	1	9/9/2019 3:45:16 PM	47250
Copper	0.0086	0.0041	0.0060		mg/L	1	9/4/2019 8:19:25 PM	47250
Iron	3.0	0.087	0.20	*	mg/L	10	9/9/2019 3:47:12 PM	47250
Manganese	0.26	0.00029	0.0020	*	mg/L	1	9/9/2019 3:45:16 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 8:19:25 PM	47250
Nickel	0.080	0.0040	0.010		mg/L	1	9/9/2019 3:45:16 PM	47250
Silver	ND	0.0014	0.0050		mg/L	1	9/4/2019 8:19:25 PM	47250
Zinc	0.016	0.0058	0.010		mg/L	1	9/9/2019 3:45:16 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:09:51 PM	A62791
Arsenic	0.0019	0.00010	0.0010		mg/L	1	9/4/2019 5:49:01 PM	C62654
Lead	0.00012	0.000055	0.00050	J	mg/L	1	9/4/2019 5:49:01 PM	C62654
Selenium	0.00037	0.00017	0.0010	J	mg/L	1	9/4/2019 5:49:01 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 5:49:01 PM	C62654
Uranium	0.015	0.000075	0.00050		mg/L	1	9/4/2019 5:49:01 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:19:59 PM	47250
Arsenic	0.0034	0.00031	0.0010		mg/L	1	9/5/2019 4:19:59 PM	47250
Lead	0.0027	0.000055	0.00050		mg/L	1	9/5/2019 4:19:59 PM	47250
Selenium	0.0014	0.00048	0.0010		mg/L	1	9/5/2019 4:19:59 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 4:19:59 PM	47250
Uranium	0.017	0.000085	0.00050		mg/L	1	9/5/2019 4:19:59 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:21:09 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 2:04:40 PM	47000

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:02:00 PM
Lab ID: 1908D36-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 2:04:40 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 2:04:40 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/28/2019 2:04:40 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 2:04:40 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 2:04:40 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 2:04:40 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 2:04:40 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 2:04:40 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 2:04:40 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 2:04:40 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 2:04:40 PM	47000

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:02:00 PM
Lab ID: 1908D36-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 2:04:40 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 2:04:40 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 2:04:40 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 2:04:40 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 2:04:40 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 2:04:40 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 2:04:40 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 2:04:40 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 2:04:40 PM	47000
Surr: 2-Fluorophenol	43.6	0	15-101		%Rec	1	8/28/2019 2:04:40 PM	47000
Surr: Phenol-d5	35.1	0	15-84.6		%Rec	1	8/28/2019 2:04:40 PM	47000
Surr: 2,4,6-Tribromophenol	70.1	0	27.8-112		%Rec	1	8/28/2019 2:04:40 PM	47000
Surr: Nitrobenzene-d5	69.8	0	33-113		%Rec	1	8/28/2019 2:04:40 PM	47000
Surr: 2-Fluorobiphenyl	64.7	0	26.6-107		%Rec	1	8/28/2019 2:04:40 PM	47000
Surr: 4-Terphenyl-d14	73.8	0	18.7-148		%Rec	1	8/28/2019 2:04:40 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	1.5	0.17	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Toluene	ND	0.35	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Methyl tert-butyl ether (MTBE)	17	0.46	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2-Dichloroethane (EDC)	9.1	0.19	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Naphthalene	ND	0.28	2.0		µg/L	1	8/26/2019 8:14:00 PM	R62416

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Qualifiers:

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B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:02:00 PM
Lab ID: 1908D36-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	0.77	0.31	4.0	J	µg/L	1	8/26/2019 8:14:00 PM	R62416
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Acetone	5.3	1.2	10	J	µg/L	1	8/26/2019 8:14:00 PM	R62416
Bromobenzene	ND	0.24	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Bromoform	ND	0.29	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Bromomethane	ND	0.27	3.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
2-Butanone	ND	2.1	10		µg/L	1	8/26/2019 8:14:00 PM	R62416
Carbon disulfide	ND	0.45	10		µg/L	1	8/26/2019 8:14:00 PM	R62416
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Chloroethane	ND	0.18	2.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Chloroform	ND	0.12	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Chloromethane	ND	0.32	3.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Dibromomethane	ND	0.21	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
2-Hexanone	ND	1.5	10		µg/L	1	8/26/2019 8:14:00 PM	R62416
Isopropylbenzene	1.5	0.19	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/26/2019 8:14:00 PM	R62416
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
n-Butylbenzene	0.98	0.23	3.0	J	µg/L	1	8/26/2019 8:14:00 PM	R62416
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-56
Project: 2019 GW Annual
Collection Date: 8/21/2019 1:02:00 PM
Lab ID: 1908D36-002
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	0.43	0.25	1.0	J	µg/L	1	8/26/2019 8:14:00 PM	R62416
Styrene	ND	0.19	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/26/2019 8:14:00 PM	R62416
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/26/2019 8:14:00 PM	R62416
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/26/2019 8:14:00 PM	R62416
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	8/26/2019 8:14:00 PM	R62416
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	8/26/2019 8:14:00 PM	R62416
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	8/26/2019 8:14:00 PM	R62416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	1.9	0.35	1.0		mg/L	1	8/26/2019 5:20:46 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 5:20:46 PM	47020
Surr: DNOP	123	0	70-130		%Rec	1	8/26/2019 5:20:46 PM	47020
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.8	0.11	0.25		mg/L	5	8/26/2019 5:01:43 PM	A62420
Surr: BFB	103	0	65.8-143		%Rec	5	8/26/2019 5:01:43 PM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.15	0.073	0.50	J	mg/L	5	8/22/2019 11:36:59 PM	R62379
Chloride	210	10	10		mg/L	20	8/22/2019 11:49:50 PM	R62379
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/22/2019 11:36:59 PM	R62379
Bromide	2.2	0.089	0.50		mg/L	5	8/22/2019 11:36:59 PM	R62379
Nitrogen, Nitrate (As N)	0.073	0.025	0.50	J	mg/L	5	8/22/2019 11:36:59 PM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/22/2019 11:36:59 PM	R62379
Sulfate	32	0.33	2.5		mg/L	5	8/22/2019 11:36:59 PM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.028	0.0025	0.020		mg/L	1	9/14/2019 12:19:27 PM	B62943
Barium	0.15	0.00065	0.0020		mg/L	1	9/14/2019 12:19:27 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:19:27 PM	B62943
Boron	0.59	0.0045	0.040		mg/L	1	9/14/2019 12:19:27 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:19:27 PM	B62943
Calcium	58	0.062	1.0		mg/L	1	9/14/2019 12:19:27 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:19:27 PM	B62943
Cobalt	0.090	0.0031	0.0060		mg/L	1	9/14/2019 12:19:27 PM	B62943
Copper	0.0039	0.0013	0.0060	J	mg/L	1	9/14/2019 12:19:27 PM	B62943
Iron	0.48	0.0087	0.020	*	mg/L	1	9/14/2019 12:19:27 PM	B62943
Magnesium	16	0.050	1.0		mg/L	1	9/14/2019 12:19:27 PM	B62943
Manganese	1.4	0.0014	0.010	*	mg/L	5	9/14/2019 12:21:37 PM	B62943
Molybdenum	0.0090	0.0067	0.0080		mg/L	1	9/14/2019 12:19:27 PM	B62943
Nickel	0.32	0.0040	0.010	*	mg/L	1	9/14/2019 12:19:27 PM	B62943
Potassium	ND	0.16	1.0		mg/L	1	9/14/2019 12:19:27 PM	B62943
Silver	ND	0.00094	0.0050		mg/L	1	9/14/2019 12:19:27 PM	B62943
Sodium	420	2.1	5.0		mg/L	5	9/14/2019 12:21:37 PM	B62943
Zinc	0.0066	0.0023	0.010	J	mg/L	1	9/14/2019 12:19:27 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	6.5	0.050	0.40	*	mg/L	20	9/9/2019 3:59:43 PM	47250
Barium	0.27	0.00065	0.0020		mg/L	1	9/9/2019 3:55:48 PM	47250
Beryllium	0.00033	0.00028	0.0020	J	mg/L	1	9/9/2019 3:55:48 PM	47250

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Boron	0.60	0.0045	0.040		mg/L	1	9/12/2019 9:33:37 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 8:23:17 PM	47250
Chromium	0.0025	0.0015	0.0060	J	mg/L	1	9/9/2019 3:55:48 PM	47250
Cobalt	0.098	0.0031	0.0060		mg/L	1	9/9/2019 3:55:48 PM	47250
Copper	0.025	0.0041	0.0060		mg/L	1	9/4/2019 8:23:17 PM	47250
Iron	2.8	0.044	0.10	*	mg/L	5	9/9/2019 3:57:47 PM	47250
Manganese	1.6	0.0014	0.010	*	mg/L	5	9/9/2019 3:57:47 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 8:23:17 PM	47250
Nickel	0.32	0.0040	0.010	*	mg/L	1	9/9/2019 3:55:48 PM	47250
Silver	ND	0.0014	0.0050		mg/L	1	9/4/2019 8:23:17 PM	47250
Zinc	0.0072	0.0058	0.010	J	mg/L	1	9/9/2019 3:55:48 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:18:00 PM	A62791
Arsenic	0.0028	0.00010	0.0010		mg/L	1	9/4/2019 5:51:43 PM	C62654
Lead	0.0058	0.000055	0.00050		mg/L	1	9/4/2019 5:51:43 PM	C62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 5:51:43 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 5:51:43 PM	C62654
Uranium	0.047	0.00037	0.0025	*	mg/L	5	9/9/2019 5:20:43 PM	A62791
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:22:10 PM	47250
Arsenic	0.0034	0.00031	0.0010		mg/L	1	9/5/2019 4:22:10 PM	47250
Lead	0.013	0.000055	0.00050		mg/L	1	9/5/2019 4:22:10 PM	47250
Selenium	0.00059	0.00048	0.0010	J	mg/L	1	9/5/2019 4:22:10 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 4:22:10 PM	47250
Uranium	0.051	0.00042	0.0025	*	mg/L	5	9/5/2019 5:55:59 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:23:27 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 2:34:23 PM	47000

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 2:34:23 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 2:34:23 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/28/2019 2:34:23 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 2:34:23 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 2:34:23 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 2:34:23 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 2:34:23 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 2:34:23 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 2:34:23 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 2:34:23 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 2:34:23 PM	47000

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 2:34:23 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 2:34:23 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 2:34:23 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 2:34:23 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 2:34:23 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 2:34:23 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 2:34:23 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 2:34:23 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 2:34:23 PM	47000
Surr: 2-Fluorophenol	57.2	0	15-101		%Rec	1	8/28/2019 2:34:23 PM	47000
Surr: Phenol-d5	47.2	0	15-84.6		%Rec	1	8/28/2019 2:34:23 PM	47000
Surr: 2,4,6-Tribromophenol	68.4	0	27.8-112		%Rec	1	8/28/2019 2:34:23 PM	47000
Surr: Nitrobenzene-d5	88.7	0	33-113		%Rec	1	8/28/2019 2:34:23 PM	47000
Surr: 2-Fluorobiphenyl	74.4	0	26.6-107		%Rec	1	8/28/2019 2:34:23 PM	47000
Surr: 4-Terphenyl-d14	74.7	0	18.7-148		%Rec	1	8/28/2019 2:34:23 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	75	0.83	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Toluene	2.0	1.8	5.0	J	µg/L	5	8/26/2019 9:02:00 PM	R62416
Ethylbenzene	22	0.66	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Methyl tert-butyl ether (MTBE)	1700	23	50		µg/L	50	8/26/2019 8:38:00 PM	R62416
1,2,4-Trimethylbenzene	12	1.1	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,3,5-Trimethylbenzene	ND	0.94	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2-Dichloroethane (EDC)	ND	0.97	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2-Dibromoethane (EDB)	ND	0.83	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Naphthalene	ND	1.4	10		µg/L	5	8/26/2019 9:02:00 PM	R62416

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	1.6	20		µg/L	5	8/26/2019 9:02:00 PM	R62416
2-Methylnaphthalene	ND	1.7	20		µg/L	5	8/26/2019 9:02:00 PM	R62416
Acetone	ND	6.0	50		µg/L	5	8/26/2019 9:02:00 PM	R62416
Bromobenzene	ND	1.2	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Bromodichloromethane	ND	0.67	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Bromoform	ND	1.4	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Bromomethane	ND	1.4	15		µg/L	5	8/26/2019 9:02:00 PM	R62416
2-Butanone	ND	10	50		µg/L	5	8/26/2019 9:02:00 PM	R62416
Carbon disulfide	ND	2.3	50		µg/L	5	8/26/2019 9:02:00 PM	R62416
Carbon Tetrachloride	ND	0.70	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Chlorobenzene	ND	0.97	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Chloroethane	ND	0.89	10		µg/L	5	8/26/2019 9:02:00 PM	R62416
Chloroform	ND	0.61	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Chloromethane	ND	1.6	15		µg/L	5	8/26/2019 9:02:00 PM	R62416
2-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
4-Chlorotoluene	ND	1.2	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
cis-1,2-DCE	ND	0.95	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
cis-1,3-Dichloropropene	ND	0.69	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2-Dibromo-3-chloropropane	ND	1.6	10		µg/L	5	8/26/2019 9:02:00 PM	R62416
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Dibromomethane	ND	1.0	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,3-Dichlorobenzene	ND	1.2	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,4-Dichlorobenzene	ND	1.5	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,1-Dichloroethane	ND	0.70	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,1-Dichloroethene	ND	1.0	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2-Dichloropropane	ND	1.0	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,3-Dichloropropane	ND	1.0	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
2,2-Dichloropropane	ND	1.2	10		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Hexachlorobutadiene	ND	1.5	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
2-Hexanone	ND	7.7	50		µg/L	5	8/26/2019 9:02:00 PM	R62416
Isopropylbenzene	1.5	0.96	5.0	J	µg/L	5	8/26/2019 9:02:00 PM	R62416
4-Isopropyltoluene	ND	1.1	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
4-Methyl-2-pentanone	ND	3.6	50		µg/L	5	8/26/2019 9:02:00 PM	R62416
Methylene Chloride	ND	0.77	15		µg/L	5	8/26/2019 9:02:00 PM	R62416
n-Butylbenzene	ND	1.1	15		µg/L	5	8/26/2019 9:02:00 PM	R62416
n-Propylbenzene	3.0	1.1	5.0	J	µg/L	5	8/26/2019 9:02:00 PM	R62416

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Qualifiers:

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B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-54
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-003
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	1.6	1.2	5.0	J	µg/L	5	8/26/2019 9:02:00 PM	R62416
Styrene	ND	0.96	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
tert-Butylbenzene	ND	1.0	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,1,1,2-Tetrachloroethane	ND	1.0	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,1,2,2-Tetrachloroethane	ND	2.7	10		µg/L	5	8/26/2019 9:02:00 PM	R62416
Tetrachloroethene (PCE)	ND	0.75	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
trans-1,2-DCE	ND	0.90	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
trans-1,3-Dichloropropene	ND	0.83	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2,3-Trichlorobenzene	ND	1.5	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2,4-Trichlorobenzene	ND	0.98	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,1,1-Trichloroethane	ND	0.86	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,1,2-Trichloroethane	ND	1.1	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Trichloroethene (TCE)	ND	0.83	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Trichlorofluoromethane	ND	0.95	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
1,2,3-Trichloropropane	ND	1.5	10		µg/L	5	8/26/2019 9:02:00 PM	R62416
Vinyl chloride	ND	0.90	5.0		µg/L	5	8/26/2019 9:02:00 PM	R62416
Xylenes, Total	3.4	2.3	7.5	J	µg/L	5	8/26/2019 9:02:00 PM	R62416
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	5	8/26/2019 9:02:00 PM	R62416
Surr: 4-Bromofluorobenzene	95.4	0	70-130		%Rec	5	8/26/2019 9:02:00 PM	R62416
Surr: Dibromofluoromethane	105	0	70-130		%Rec	5	8/26/2019 9:02:00 PM	R62416
Surr: Toluene-d8	98.4	0	70-130		%Rec	5	8/26/2019 9:02:00 PM	R62416

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:08:00 PM
Lab ID: 1908D36-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	0.38	0.35	1.0	J	mg/L	1	8/26/2019 5:45:02 PM	47020
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/26/2019 5:45:02 PM	47020
Surr: DNOP	126	0	70-130		%Rec	1	8/26/2019 5:45:02 PM	47020
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.35	0.021	0.050		mg/L	1	8/26/2019 5:24:51 PM	A62420
Surr: BFB	6330	0	65.8-143	S	%Rec	1	8/26/2019 5:24:51 PM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.073	0.50		mg/L	5	8/23/2019 12:02:42 AM	R62379
Chloride	2100	100	100		mg/L	200	8/28/2019 2:19:43 PM	R62484
Nitrogen, Nitrite (As N)	ND	0.11	2.0		mg/L	20	8/23/2019 12:15:34 AM	R62379
Bromide	2.0	0.089	0.50		mg/L	5	8/23/2019 12:02:42 AM	R62379
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 12:02:42 AM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 12:02:42 AM	R62379
Sulfate	2500	13	100		mg/L	200	8/28/2019 2:19:43 PM	R62484
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.0047	0.0025	0.020	J	mg/L	1	9/14/2019 12:25:56 PM	B62943
Barium	0.011	0.00065	0.0020		mg/L	1	9/14/2019 12:25:56 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:25:56 PM	B62943
Boron	2.5	0.045	0.40		mg/L	10	9/14/2019 12:28:11 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:25:56 PM	B62943
Calcium	220	0.62	10		mg/L	10	9/14/2019 12:28:11 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:25:56 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 12:25:56 PM	B62943
Copper	0.0067	0.0013	0.0060		mg/L	1	9/14/2019 12:25:56 PM	B62943
Iron	0.023	0.0087	0.020		mg/L	1	9/14/2019 12:25:56 PM	B62943
Magnesium	62	0.050	1.0		mg/L	1	9/14/2019 12:25:56 PM	B62943
Manganese	0.13	0.00029	0.0020	*	mg/L	1	9/14/2019 12:25:56 PM	B62943
Molybdenum	0.019	0.0067	0.0080		mg/L	1	9/14/2019 12:25:56 PM	B62943
Nickel	0.024	0.0040	0.010		mg/L	1	9/14/2019 12:25:56 PM	B62943
Potassium	0.56	0.16	1.0	J	mg/L	1	9/14/2019 12:25:56 PM	B62943
Silver	0.0031	0.00094	0.0050	J	mg/L	1	9/14/2019 12:25:56 PM	B62943
Sodium	2400	21	50		mg/L	50	9/16/2019 2:27:21 PM	A62967
Zinc	0.013	0.0023	0.010		mg/L	1	9/14/2019 12:25:56 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	4.9	0.025	0.20	*	mg/L	10	9/9/2019 4:03:53 PM	47250
Barium	0.076	0.00065	0.0020		mg/L	1	9/9/2019 4:01:54 PM	47250
Beryllium	0.00044	0.00028	0.0020	J	mg/L	1	9/9/2019 4:01:54 PM	47250

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PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:08:00 PM
Lab ID: 1908D36-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Boron	2.5	0.023	0.20		mg/L	5	9/12/2019 9:35:27 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 8:27:08 PM	47250
Chromium	0.0016	0.0015	0.0060	J	mg/L	1	9/9/2019 4:01:54 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/4/2019 8:27:08 PM	47250
Copper	ND	0.0041	0.0060		mg/L	1	9/4/2019 8:27:08 PM	47250
Iron	2.1	0.087	0.20	*	mg/L	10	9/9/2019 4:03:53 PM	47250
Manganese	0.22	0.0014	0.010	*	mg/L	5	9/12/2019 9:35:27 AM	47376
Molybdenum	0.022	0.0067	0.0080		mg/L	1	9/4/2019 8:27:08 PM	47250
Nickel	0.027	0.0040	0.010		mg/L	1	9/9/2019 4:01:54 PM	47250
Silver	0.0038	0.0014	0.0050	J	mg/L	1	9/4/2019 8:27:08 PM	47250
Zinc	ND	0.0058	0.010		mg/L	1	9/9/2019 4:01:54 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/9/2019 5:23:24 PM	A62791
Arsenic	0.0045	0.00050	0.0050	J	mg/L	5	9/9/2019 5:23:24 PM	A62791
Lead	ND	0.00027	0.0025		mg/L	5	9/9/2019 5:23:24 PM	A62791
Selenium	0.0016	0.00086	0.0050	J	mg/L	5	9/9/2019 5:23:24 PM	A62791
Thallium	ND	0.00024	0.0025		mg/L	5	9/9/2019 5:23:24 PM	A62791
Uranium	0.12	0.00037	0.0025	*	mg/L	5	9/9/2019 5:23:24 PM	A62791
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/5/2019 5:58:09 PM	47250
Arsenic	0.0055	0.0016	0.0050		mg/L	5	9/5/2019 5:58:09 PM	47250
Lead	0.0014	0.00027	0.0025	J	mg/L	5	9/5/2019 5:58:09 PM	47250
Selenium	ND	0.0024	0.0050		mg/L	5	9/5/2019 5:58:09 PM	47250
Thallium	ND	0.00026	0.0025		mg/L	5	9/5/2019 5:58:09 PM	47250
Uranium	0.13	0.00085	0.0050	*	mg/L	10	9/5/2019 6:24:24 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:25:45 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 3:04:10 PM	47000

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:08:00 PM
Lab ID: 1908D36-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 3:04:10 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 3:04:10 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/28/2019 3:04:10 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 3:04:10 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 3:04:10 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 3:04:10 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 3:04:10 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 3:04:10 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 3:04:10 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 3:04:10 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 3:04:10 PM	47000

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:08:00 PM
Lab ID: 1908D36-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 3:04:10 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 3:04:10 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 3:04:10 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 3:04:10 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 3:04:10 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 3:04:10 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 3:04:10 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 3:04:10 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 3:04:10 PM	47000
Surr: 2-Fluorophenol	1.03	0	15-101	S	%Rec	1	8/28/2019 3:04:10 PM	47000
Surr: Phenol-d5	5.97	0	15-84.6	S	%Rec	1	8/28/2019 3:04:10 PM	47000
Surr: 2,4,6-Tribromophenol	0.590	0	27.8-112	S	%Rec	1	8/28/2019 3:04:10 PM	47000
Surr: Nitrobenzene-d5	76.8	0	33-113		%Rec	1	8/28/2019 3:04:10 PM	47000
Surr: 2-Fluorobiphenyl	69.1	0	26.6-107		%Rec	1	8/28/2019 3:04:10 PM	47000
Surr: 4-Terphenyl-d14	74.4	0	18.7-148		%Rec	1	8/28/2019 3:04:10 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Toluene	ND	0.35	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Methyl tert-butyl ether (MTBE)	10	0.46	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Naphthalene	ND	0.28	2.0		µg/L	1	8/26/2019 9:27:00 PM	R62416

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:08:00 PM
Lab ID: 1908D36-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Acetone	5.6	1.2	10	J	µg/L	1	8/26/2019 9:27:00 PM	R62416
Bromobenzene	ND	0.24	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Bromoform	ND	0.29	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Bromomethane	ND	0.27	3.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
2-Butanone	ND	2.1	10		µg/L	1	8/26/2019 9:27:00 PM	R62416
Carbon disulfide	ND	0.45	10		µg/L	1	8/26/2019 9:27:00 PM	R62416
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Chloroethane	ND	0.18	2.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Chloroform	ND	0.12	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Chloromethane	ND	0.32	3.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Dibromomethane	ND	0.21	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
2-Hexanone	ND	1.5	10		µg/L	1	8/26/2019 9:27:00 PM	R62416
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/26/2019 9:27:00 PM	R62416
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-59
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:08:00 PM
Lab ID: 1908D36-004
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Styrene	ND	0.19	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/26/2019 9:27:00 PM	R62416
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/26/2019 9:27:00 PM	R62416
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	8/26/2019 9:27:00 PM	R62416
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	8/26/2019 9:27:00 PM	R62416
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	8/26/2019 9:27:00 PM	R62416
Surr: Toluene-d8	93.9	0	70-130		%Rec	1	8/26/2019 9:27:00 PM	R62416

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 GW Annual
Collection Date: 8/21/2019 11:40:00 AM
Lab ID: 1908D36-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/27/2019 8:34:34 PM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 8:34:34 PM	47050
Surr: DNOP	97.9	0	70-130		%Rec	1	8/27/2019 8:34:34 PM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/26/2019 5:47:56 PM	A62420
Surr: BFB	105	0	65.8-143		%Rec	1	8/26/2019 5:47:56 PM	A62420
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.073	0.50		mg/L	5	8/23/2019 12:28:26 AM	R62379
Chloride	2500	100	100		mg/L	200	8/28/2019 2:32:08 PM	R62484
Nitrogen, Nitrite (As N)	ND	0.11	2.0		mg/L	20	8/23/2019 12:41:18 AM	R62379
Bromide	3.4	0.089	0.50		mg/L	5	8/23/2019 12:28:26 AM	R62379
Nitrogen, Nitrate (As N)	29	0.025	0.50	*	mg/L	5	8/23/2019 12:28:26 AM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 12:28:26 AM	R62379
Sulfate	200	0.33	2.5		mg/L	5	8/23/2019 12:28:26 AM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 12:30:17 PM	B62943
Barium	0.15	0.00065	0.0020		mg/L	1	9/14/2019 12:30:17 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:30:17 PM	B62943
Boron	2.3	0.045	0.40		mg/L	10	9/14/2019 12:32:32 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:30:17 PM	B62943
Calcium	130	0.62	10		mg/L	10	9/14/2019 12:32:32 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:30:17 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 12:30:17 PM	B62943
Copper	0.0060	0.0013	0.0060		mg/L	1	9/14/2019 12:30:17 PM	B62943
Iron	0.029	0.0087	0.020		mg/L	1	9/14/2019 12:30:17 PM	B62943
Magnesium	18	0.050	1.0		mg/L	1	9/14/2019 12:30:17 PM	B62943
Manganese	ND	0.00029	0.0020		mg/L	1	9/14/2019 12:30:17 PM	B62943
Molybdenum	0.017	0.0067	0.0080		mg/L	1	9/14/2019 12:30:17 PM	B62943
Nickel	ND	0.0040	0.010		mg/L	1	9/14/2019 12:30:17 PM	B62943
Potassium	5.3	0.16	1.0		mg/L	1	9/14/2019 12:30:17 PM	B62943
Silver	0.0021	0.00094	0.0050	J	mg/L	1	9/14/2019 12:30:17 PM	B62943
Sodium	1500	8.3	20		mg/L	20	9/16/2019 2:29:31 PM	A62967
Zinc	0.0096	0.0023	0.010	J	mg/L	1	9/14/2019 12:30:17 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.44	0.0025	0.020	*	mg/L	1	9/4/2019 8:40:54 PM	47250
Barium	0.14	0.00065	0.0020		mg/L	1	9/9/2019 4:06:01 PM	47250
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 4:06:01 PM	47250

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 GW Annual
Collection Date: 8/21/2019 11:40:00 AM
Lab ID: 1908D36-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	2.2	0.023	0.20		mg/L	5	9/12/2019 9:37:28 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 8:40:54 PM	47250
Chromium	ND	0.0015	0.0060		mg/L	1	9/9/2019 4:06:01 PM	47250
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 4:06:01 PM	47250
Copper	ND	0.0041	0.0060		mg/L	1	9/4/2019 8:40:54 PM	47250
Iron	0.28	0.0087	0.020		mg/L	1	9/9/2019 4:06:01 PM	47250
Manganese	0.0074	0.00029	0.0020		mg/L	1	9/9/2019 4:06:01 PM	47250
Molybdenum	0.017	0.0067	0.0080		mg/L	1	9/4/2019 8:40:54 PM	47250
Nickel	ND	0.0040	0.010		mg/L	1	9/9/2019 4:06:01 PM	47250
Silver	0.0023	0.0014	0.0050	J	mg/L	1	9/4/2019 8:40:54 PM	47250
Zinc	0.0062	0.0058	0.010	J	mg/L	1	9/9/2019 4:06:01 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/9/2019 5:26:06 PM	A62791
Arsenic	0.0021	0.00050	0.0050	J	mg/L	5	9/9/2019 5:26:06 PM	A62791
Lead	ND	0.00027	0.0025		mg/L	5	9/9/2019 5:26:06 PM	A62791
Selenium	0.0039	0.00086	0.0050	J	mg/L	5	9/9/2019 5:26:06 PM	A62791
Thallium	ND	0.00024	0.0025		mg/L	5	9/9/2019 5:26:06 PM	A62791
Uranium	0.031	0.00037	0.0025	*	mg/L	5	9/9/2019 5:26:06 PM	A62791
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:30:55 PM	47250
Arsenic	0.0023	0.00031	0.0010		mg/L	1	9/5/2019 4:30:55 PM	47250
Lead	0.00028	0.000055	0.00050	J	mg/L	1	9/5/2019 4:30:55 PM	47250
Selenium	0.0047	0.00048	0.0010		mg/L	1	9/5/2019 4:30:55 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 4:30:55 PM	47250
Uranium	0.032	0.00042	0.0025	*	mg/L	5	9/5/2019 6:00:20 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:28:04 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 3:33:57 PM	47000

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 GW Annual
Collection Date: 8/21/2019 11:40:00 AM
Lab ID: 1908D36-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 3:33:57 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 3:33:57 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/28/2019 3:33:57 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 3:33:57 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 3:33:57 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 3:33:57 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 3:33:57 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 3:33:57 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 3:33:57 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 3:33:57 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 3:33:57 PM	47000

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 GW Annual
Collection Date: 8/21/2019 11:40:00 AM
Lab ID: 1908D36-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 3:33:57 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 3:33:57 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 3:33:57 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 3:33:57 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 3:33:57 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 3:33:57 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 3:33:57 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 3:33:57 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 3:33:57 PM	47000
Surr: 2-Fluorophenol	47.5	0	15-101		%Rec	1	8/28/2019 3:33:57 PM	47000
Surr: Phenol-d5	36.1	0	15-84.6		%Rec	1	8/28/2019 3:33:57 PM	47000
Surr: 2,4,6-Tribromophenol	58.5	0	27.8-112		%Rec	1	8/28/2019 3:33:57 PM	47000
Surr: Nitrobenzene-d5	72.8	0	33-113		%Rec	1	8/28/2019 3:33:57 PM	47000
Surr: 2-Fluorobiphenyl	63.6	0	26.6-107		%Rec	1	8/28/2019 3:33:57 PM	47000
Surr: 4-Terphenyl-d14	70.4	0	18.7-148		%Rec	1	8/28/2019 3:33:57 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Toluene	ND	0.35	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Naphthalene	ND	0.28	2.0		µg/L	1	8/26/2019 9:51:00 PM	R62416

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E	Value above quantitation range
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 GW Annual
Collection Date: 8/21/2019 11:40:00 AM
Lab ID: 1908D36-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Acetone	1.7	1.2	10	J	µg/L	1	8/26/2019 9:51:00 PM	R62416
Bromobenzene	ND	0.24	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Bromoform	ND	0.29	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Bromomethane	ND	0.27	3.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
2-Butanone	ND	2.1	10		µg/L	1	8/26/2019 9:51:00 PM	R62416
Carbon disulfide	ND	0.45	10		µg/L	1	8/26/2019 9:51:00 PM	R62416
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Chloroethane	ND	0.18	2.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Chloroform	ND	0.12	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Chloromethane	ND	0.32	3.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Dibromomethane	ND	0.21	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
2-Hexanone	ND	1.5	10		µg/L	1	8/26/2019 9:51:00 PM	R62416
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/26/2019 9:51:00 PM	R62416
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2019 GW Annual
Collection Date: 8/21/2019 11:40:00 AM
Lab ID: 1908D36-005
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Styrene	ND	0.19	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/26/2019 9:51:00 PM	R62416
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/26/2019 9:51:00 PM	R62416
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	8/26/2019 9:51:00 PM	R62416
Surr: 4-Bromofluorobenzene	96.8	0	70-130		%Rec	1	8/26/2019 9:51:00 PM	R62416
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	8/26/2019 9:51:00 PM	R62416
Surr: Toluene-d8	95.7	0	70-130		%Rec	1	8/26/2019 9:51:00 PM	R62416

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	2.0	0.35	1.0		mg/L	1	8/27/2019 9:49:01 PM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 9:49:01 PM	47050
Surr: DNOP	107	0	70-130		%Rec	1	8/27/2019 9:49:01 PM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.5	0.021	0.050		mg/L	1	8/26/2019 7:20:03 PM	B62420
Surr: BFB	111	0	65.8-143		%Rec	1	8/26/2019 7:20:03 PM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.14	0.073	0.50	J	mg/L	5	8/23/2019 12:54:11 AM	R62379
Chloride	210	10	10		mg/L	20	8/23/2019 1:07:02 AM	R62379
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/23/2019 12:54:11 AM	R62379
Bromide	2.1	0.089	0.50		mg/L	5	8/23/2019 12:54:11 AM	R62379
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 12:54:11 AM	R62379
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 12:54:11 AM	R62379
Sulfate	29	0.33	2.5		mg/L	5	8/23/2019 12:54:11 AM	R62379
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.027	0.0025	0.020		mg/L	1	9/14/2019 12:34:38 PM	B62943
Barium	0.15	0.00065	0.0020		mg/L	1	9/14/2019 12:34:38 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:34:38 PM	B62943
Boron	0.58	0.0045	0.040		mg/L	1	9/14/2019 12:34:38 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:34:38 PM	B62943
Calcium	57	0.062	1.0		mg/L	1	9/14/2019 12:34:38 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:34:38 PM	B62943
Cobalt	0.088	0.0031	0.0060		mg/L	1	9/14/2019 12:34:38 PM	B62943
Copper	0.0033	0.0013	0.0060	J	mg/L	1	9/14/2019 12:34:38 PM	B62943
Iron	0.46	0.0087	0.020	*	mg/L	1	9/14/2019 12:34:38 PM	B62943
Magnesium	16	0.050	1.0		mg/L	1	9/14/2019 12:34:38 PM	B62943
Manganese	1.4	0.0014	0.010	*	mg/L	5	9/14/2019 12:36:46 PM	B62943
Molybdenum	0.0072	0.0067	0.0080	J	mg/L	1	9/14/2019 12:34:38 PM	B62943
Nickel	0.32	0.0040	0.010	*	mg/L	1	9/14/2019 12:34:38 PM	B62943
Potassium	ND	0.16	1.0		mg/L	1	9/14/2019 12:34:38 PM	B62943
Silver	ND	0.00094	0.0050		mg/L	1	9/14/2019 12:34:38 PM	B62943
Sodium	430	2.1	5.0		mg/L	5	9/14/2019 12:36:46 PM	B62943
Zinc	0.0094	0.0023	0.010	J	mg/L	1	9/14/2019 12:34:38 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Aluminum	6.1	0.050	0.40	*	mg/L	20	9/9/2019 4:14:19 PM	47250
Barium	0.27	0.00065	0.0020		mg/L	1	9/9/2019 4:10:16 PM	47250
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 4:10:16 PM	47250

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Boron	0.59	0.0045	0.040		mg/L	1	9/12/2019 9:50:09 AM	47376
Cadmium	ND	0.00074	0.0020		mg/L	1	9/4/2019 8:45:12 PM	47250
Chromium	0.0023	0.0015	0.0060	J	mg/L	1	9/9/2019 4:10:16 PM	47250
Cobalt	0.10	0.0031	0.0060		mg/L	1	9/9/2019 4:10:16 PM	47250
Copper	0.026	0.0041	0.0060		mg/L	1	9/4/2019 8:45:12 PM	47250
Iron	2.7	0.044	0.10	*	mg/L	5	9/9/2019 4:12:13 PM	47250
Manganese	1.6	0.0014	0.010	*	mg/L	5	9/9/2019 4:12:13 PM	47250
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/4/2019 8:45:12 PM	47250
Nickel	0.32	0.0040	0.010	*	mg/L	1	9/9/2019 4:10:16 PM	47250
Silver	ND	0.0014	0.0050		mg/L	1	9/4/2019 8:45:12 PM	47250
Zinc	0.0074	0.0058	0.010	J	mg/L	1	9/9/2019 4:10:16 PM	47250
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:28:47 PM	A62791
Arsenic	0.0029	0.00010	0.0010		mg/L	1	9/4/2019 5:59:50 PM	C62654
Lead	0.0058	0.000055	0.00050		mg/L	1	9/4/2019 5:59:50 PM	C62654
Selenium	0.00024	0.00017	0.0010	J	mg/L	1	9/4/2019 5:59:50 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 5:59:50 PM	C62654
Uranium	0.055	0.00037	0.0025	*	mg/L	5	9/10/2019 6:47:41 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 4:33:06 PM	47250
Arsenic	0.0038	0.00031	0.0010		mg/L	1	9/5/2019 4:33:06 PM	47250
Lead	0.014	0.000055	0.00050		mg/L	1	9/5/2019 4:33:06 PM	47250
Selenium	ND	0.00048	0.0010		mg/L	1	9/5/2019 4:33:06 PM	47250
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 4:33:06 PM	47250
Uranium	0.053	0.00042	0.0025	*	mg/L	5	9/5/2019 6:02:32 PM	47250
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/10/2019 5:30:17 PM	47375
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Acenaphthylene	ND	2.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Aniline	ND	3.6	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Anthracene	ND	2.7	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Azobenzene	ND	3.3	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/28/2019 4:03:43 PM	47000

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Benzoic acid	ND	11	20		µg/L	1	8/28/2019 4:03:43 PM	47000
Benzyl alcohol	ND	2.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/28/2019 4:03:43 PM	47000
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Carbazole	ND	2.9	10		µg/L	1	8/28/2019 4:03:43 PM	47000
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
4-Chloroaniline	ND	2.3	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2-Chlorophenol	ND	2.7	10		µg/L	1	8/28/2019 4:03:43 PM	47000
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Chrysene	ND	2.8	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Dibenzofuran	ND	3.2	10		µg/L	1	8/28/2019 4:03:43 PM	47000
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/28/2019 4:03:43 PM	47000
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/28/2019 4:03:43 PM	47000
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Diethyl phthalate	ND	2.9	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/28/2019 4:03:43 PM	47000
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/28/2019 4:03:43 PM	47000
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/28/2019 4:03:43 PM	47000
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Fluoranthene	ND	2.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Fluorene	ND	2.9	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Hexachloroethane	ND	4.8	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/28/2019 4:03:43 PM	47000

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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2-Methylphenol	ND	2.9	10		µg/L	1	8/28/2019 4:03:43 PM	47000
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/28/2019 4:03:43 PM	47000
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/28/2019 4:03:43 PM	47000
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Naphthalene	ND	4.1	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 4:03:43 PM	47000
3-Nitroaniline	ND	3.2	10		µg/L	1	8/28/2019 4:03:43 PM	47000
4-Nitroaniline	ND	2.7	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Nitrobenzene	ND	2.8	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2-Nitrophenol	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
4-Nitrophenol	ND	7.6	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Pentachlorophenol	ND	2.7	20		µg/L	1	8/28/2019 4:03:43 PM	47000
Phenanthrene	ND	2.8	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Phenol	ND	8.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Pyrene	ND	2.5	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Pyridine	ND	9.6	10		µg/L	1	8/28/2019 4:03:43 PM	47000
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/28/2019 4:03:43 PM	47000
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/28/2019 4:03:43 PM	47000
Surr: 2-Fluorophenol	45.4	0	15-101		%Rec	1	8/28/2019 4:03:43 PM	47000
Surr: Phenol-d5	40.4	0	15-84.6		%Rec	1	8/28/2019 4:03:43 PM	47000
Surr: 2,4,6-Tribromophenol	62.8	0	27.8-112		%Rec	1	8/28/2019 4:03:43 PM	47000
Surr: Nitrobenzene-d5	77.6	0	33-113		%Rec	1	8/28/2019 4:03:43 PM	47000
Surr: 2-Fluorobiphenyl	74.0	0	26.6-107		%Rec	1	8/28/2019 4:03:43 PM	47000
Surr: 4-Terphenyl-d14	77.7	0	18.7-148		%Rec	1	8/28/2019 4:03:43 PM	47000
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	78	0.17	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Toluene	1.7	0.35	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Ethylbenzene	23	0.13	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Methyl tert-butyl ether (MTBE)	1600	91	200		µg/L	200	8/27/2019 11:06:00 AM	R62438
1,2,4-Trimethylbenzene	13	0.21	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,3,5-Trimethylbenzene	0.33	0.19	1.0	J	µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Naphthalene	ND	0.28	2.0		µg/L	1	8/26/2019 10:15:00 PM	R62416

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Acetone	ND	1.2	10		µg/L	1	8/26/2019 10:15:00 PM	R62416
Bromobenzene	ND	0.24	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Bromoform	ND	0.29	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Bromomethane	ND	0.27	3.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
2-Butanone	ND	2.1	10		µg/L	1	8/26/2019 10:15:00 PM	R62416
Carbon disulfide	ND	0.45	10		µg/L	1	8/26/2019 10:15:00 PM	R62416
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Chloroethane	ND	0.18	2.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Chloroform	ND	0.12	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Chloromethane	ND	0.32	3.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Dibromomethane	ND	0.21	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
2-Hexanone	ND	1.5	10		µg/L	1	8/26/2019 10:15:00 PM	R62416
Isopropylbenzene	0.81	0.19	1.0	J	µg/L	1	8/26/2019 10:15:00 PM	R62416
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/26/2019 10:15:00 PM	R62416
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
n-Butylbenzene	1.1	0.23	3.0	J	µg/L	1	8/26/2019 10:15:00 PM	R62416
n-Propylbenzene	2.5	0.21	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 GW Annual
Collection Date: 8/21/2019 12:30:00 PM
Lab ID: 1908D36-006
Matrix: AQUEOUS
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	0.93	0.25	1.0	J	µg/L	1	8/26/2019 10:15:00 PM	R62416
Styrene	ND	0.19	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
tert-Butylbenzene	0.21	0.21	1.0	J	µg/L	1	8/26/2019 10:15:00 PM	R62416
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/26/2019 10:15:00 PM	R62416
Xylenes, Total	2.6	0.45	1.5		µg/L	1	8/26/2019 10:15:00 PM	R62416
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/26/2019 10:15:00 PM	R62416
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	8/26/2019 10:15:00 PM	R62416
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	8/26/2019 10:15:00 PM	R62416
Surr: Toluene-d8	95.4	0	70-130		%Rec	1	8/26/2019 10:15:00 PM	R62416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 GW Annual
Collection Date:
Lab ID: 1908D36-007
Matrix: TRIP BLANK
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Toluene	0.50	0.35	1.0	J	µg/L	1	8/26/2019 10:39:00 PM	R62416
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Naphthalene	ND	0.28	2.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Acetone	ND	1.2	10		µg/L	1	8/26/2019 10:39:00 PM	R62416
Bromobenzene	ND	0.24	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Bromoform	ND	0.29	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Bromomethane	ND	0.27	3.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
2-Butanone	ND	2.1	10		µg/L	1	8/26/2019 10:39:00 PM	R62416
Carbon disulfide	ND	0.45	10		µg/L	1	8/26/2019 10:39:00 PM	R62416
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Chlorobenzene	0.62	0.19	1.0	J	µg/L	1	8/26/2019 10:39:00 PM	R62416
Chloroethane	ND	0.18	2.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Chloroform	ND	0.12	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Chloromethane	ND	0.32	3.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Dibromomethane	ND	0.21	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/26/2019 10:39:00 PM	R62416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 GW Annual
Collection Date:
Lab ID: 1908D36-007
Matrix: TRIP BLANK
Received Date: 8/21/2019 4:50:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
2-Hexanone	ND	1.5	10		µg/L	1	8/26/2019 10:39:00 PM	R62416
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/26/2019 10:39:00 PM	R62416
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Styrene	ND	0.19	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/26/2019 10:39:00 PM	R62416
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/26/2019 10:39:00 PM	R62416
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	8/26/2019 10:39:00 PM	R62416
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	8/26/2019 10:39:00 PM	R62416
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	8/26/2019 10:39:00 PM	R62416
Surr: Toluene-d8	98.8	0	70-130		%Rec	1	8/26/2019 10:39:00 PM	R62416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 GW Annual

Sample ID: **MB-47250** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**

Client ID: **PBW** Batch ID: **47250** RunNo: **62659**

Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-47250** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**

Client ID: **BatchQC** Batch ID: **47250** RunNo: **62659**

Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133461** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	111	50	150			J
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Beryllium	0.0020	0.0020	0.002000	0	99.4	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	85.7	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.1	50	150			J
Cobalt	0.0057	0.0060	0.006000	0	95.6	50	150			J
Copper	0.0074	0.0060	0.006000	0	124	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0022	0.0020	0.002000	0	109	50	150			
Molybdenum	0.0090	0.0080	0.008000	0	113	50	150			
Nickel	0.0042	0.010	0.005000	0	83.0	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Zinc	0.011	0.010	0.01000	0	107	50	150			

Sample ID: **LCS-47250** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**

Client ID: **LCSW** Batch ID: **47250** RunNo: **62659**

Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133463** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	101	85	115			
Barium	0.47	0.0020	0.5000	0	94.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **LCS-47250** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **47250** RunNo: **62659**
Prep Date: **9/3/2019** Analysis Date: **9/4/2019** SeqNo: **2133463** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.3	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Molybdenum	0.48	0.0080	0.5000	0	96.6	85	115			
Nickel	0.47	0.010	0.5000	0	94.1	85	115			
Silver	0.098	0.0050	0.1000	0	98.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Sample ID: **1908D36-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **OW-57** Batch ID: **47376** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.78	0.040	0.5000	0.2841	99.0	70	130			

Sample ID: **1908D36-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **OW-57** Batch ID: **47376** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.78	0.040	0.5000	0.2841	99.3	70	130	0.175	20	

Sample ID: **1908D36-005FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **STP1-NW** Batch ID: **47376** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142395** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.6	0.20	0.5000	2.183	88.3	70	130			

Sample ID: **1908D36-005FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **STP1-NW** Batch ID: **47376** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142396** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.7	0.20	0.5000	2.183	105	70	130	3.18	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-47376**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142401** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								
Manganese	ND	0.0020								

Sample ID: **LLLCS-47376**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142402** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.039	0.040	0.04000	0	97.2	50	150			J
Manganese	0.0027	0.0020	0.002000	0	134	50	150			

Sample ID: **LCS-47376**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.2	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145669** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0094	0.020	0.01000	0	93.8	50	150			J
Barium	0.0021	0.0020	0.002000	0	106	50	150			
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	0.55	1.0	0.5000	0	110	50	150			J
Chromium	0.0063	0.0060	0.006000	0	104	50	150			
Cobalt	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0060	0.0060	0.006000	0	99.6	50	150			J
Iron	0.020	0.020	0.02000	0	99.2	50	150			J
Magnesium	0.53	1.0	0.5000	0	105	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0092	0.0080	0.008000	0	115	50	150			
Nickel	0.0067	0.010	0.005000	0	134	50	150			J
Potassium	0.40	1.0	0.5000	0	79.6	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Sodium	0.55	1.0	0.5000	0	111	50	150			J
Zinc	0.013	0.010	0.01000	0	128	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	97.7	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.0	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.48	0.010	0.5000	0	96.1	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146091** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.46	1.0	0.5000	0	92.9	50	150			J

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-47250** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135602** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-47250** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135604** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00088	0.0010	0.001000	0	88.1	50	150			J
Arsenic	0.0011	0.0010	0.001000	0	110	50	150			
Lead	0.00052	0.00050	0.0005000	0	104	50	150			
Selenium	0.0010	0.0010	0.001000	0	104	50	150			
Thallium	0.00044	0.00050	0.0005000	0	87.8	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **MSLCS-47250** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **47250** RunNo: **62715**
Prep Date: **9/3/2019** Analysis Date: **9/5/2019** SeqNo: **2135606** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	108	85	115			
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Lead	0.012	0.00050	0.01250	0	99.0	85	115			
Selenium	0.024	0.0010	0.02500	0	94.5	85	115			
Thallium	0.012	0.00050	0.01250	0	97.5	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133308** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133311** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.7	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.0	50	150			J
Selenium	0.0012	0.0010	0.001000	0	123	50	150			
Thallium	0.00048	0.00050	0.0005000	0	95.2	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C62654**	RunNo: **62654**
Prep Date:	Analysis Date: **9/4/2019**	SeqNo: **2133312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	85	115			
Lead	0.012	0.00050	0.01250	0	97.5	85	115			
Selenium	0.024	0.0010	0.02500	0	95.7	85	115			
Thallium	0.012	0.00050	0.01250	0	97.4	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139237** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010								J
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 GW Annual

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0012	0.0010	0.001000	0	119	50	150			
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.5	50	150			J
Selenium	0.0013	0.0010	0.001000	0	134	50	150			
Thallium	0.00047	0.00050	0.0005000	0	93.7	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.6	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139239** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.3	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.1	85	115			
Selenium	0.025	0.0010	0.02500	0	99.5	85	115			
Thallium	0.012	0.00050	0.01250	0	95.8	85	115			
Uranium	0.012	0.00050	0.01250	0	94.6	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62810**	RunNo: **62810**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2140224** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62810**	RunNo: **62810**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2140225** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62810**	RunNo: **62810**
Prep Date:	Analysis Date: **9/10/2019**	SeqNo: **2140226** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-47375**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **47375**	RunNo: **62816**
Prep Date: **9/10/2019**	Analysis Date: **9/10/2019**	SeqNo: **2140381** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-47375**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **47375**	RunNo: **62816**
Prep Date: **9/10/2019**	Analysis Date: **9/10/2019**	SeqNo: **2140382** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62379**	RunNo: **62379**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2120253** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62379**	RunNo: **62379**
Prep Date:	Analysis Date: **8/22/2019**	SeqNo: **2120254** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	105	90	110			
Chloride	4.9	0.50	5.000	0	97.3	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.2	90	110			
Bromide	2.5	0.10	2.500	0	99.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.4	90	110			
Sulfate	9.8	0.50	10.00	0	98.2	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62484**	RunNo: **62484**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62484**	RunNo: **62484**
Prep Date:	Analysis Date: **8/28/2019**	SeqNo: **2125321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			
Sulfate	9.8	0.50	10.00	0	97.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-47020** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW** Batch ID: **47020** RunNo: **62411**
Prep Date: **8/23/2019** Analysis Date: **8/26/2019** SeqNo: **2122349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.86		1.000		85.7	70	130			

Sample ID: **LCS-47020** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **47020** RunNo: **62439**
Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	111	71.8	135			
Surr: DNOP	0.57		0.5000		114	70	130			

Sample ID: **MB-47079** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW** Batch ID: **47079** RunNo: **62439**
Prep Date: **8/27/2019** Analysis Date: **8/27/2019** SeqNo: **2123592** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	1.2		1.000		118	70	130			

Sample ID: **LCS-47079** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **47079** RunNo: **62439**
Prep Date: **8/27/2019** Analysis Date: **8/27/2019** SeqNo: **2123593** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	0.47		0.5000		94.6	70	130			

Sample ID: **LCS-47050** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW** Batch ID: **47050** RunNo: **62446**
Prep Date: **8/26/2019** Analysis Date: **8/27/2019** SeqNo: **2123786** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	103	71.8	135			
Surr: DNOP	0.50		0.5000		101	70	130			

Sample ID: **MB-47050** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW** Batch ID: **47050** RunNo: **62446**
Prep Date: **8/26/2019** Analysis Date: **8/27/2019** SeqNo: **2123787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-47050**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **47050**	RunNo: **62446**
Prep Date: **8/26/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		112	70	130			

Sample ID: **1908D36-005BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1-NW**	Batch ID: **47050**	RunNo: **62446**
Prep Date: **8/26/2019**	Analysis Date: **8/27/2019**	SeqNo: **2124076** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	68.1	137			
Surr: DNOP	0.44		0.5000		88.9	70	130			

Sample ID: **1908D36-005BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1-NW**	Batch ID: **47050**	RunNo: **62446**
Prep Date: **8/26/2019**	Analysis Date: **8/27/2019**	SeqNo: **2124077** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	109	68.1	137	7.83	20	
Surr: DNOP	0.50		0.5000		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122301** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.3	65.8	143			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122302** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.7	73.6	119			
Surr: BFB	23		20.00		116	65.8	143			

Sample ID: **1908D36-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-57**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122319** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	36	1.0	10.00	26.43	97.2	65.4	140			
Surr: BFB	500		400.0		126	65.8	143			

Sample ID: **1908D36-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-57**	Batch ID: **A62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	36	1.0	10.00	26.43	97.2	65.4	140	0.0111	20	
Surr: BFB	520		400.0		131	65.8	143	0	0	

Sample ID: **RB-II**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **B62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122358** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		101	65.8	143			

Sample ID: **2.5UG GRO LCS-II**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **B62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **2.5UG GRO LCS-II** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **B62420** RunNo: **62420**
Prep Date: Analysis Date: **8/26/2019** SeqNo: **2122373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.4	73.6	119			
Surr: BFB	26		20.00		129	65.8	143			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R62416** RunNo: **62416**
Prep Date: Analysis Date: **8/26/2019** SeqNo: **2122768** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.0	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	22	1.0	20.00	0	108	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	85.6	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.2	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.5	70	130			
Surr: Toluene-d8	9.7		10.00		97.3	70	130			

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R62416** RunNo: **62416**
Prep Date: Analysis Date: **8/26/2019** SeqNo: **2122769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62416**	RunNo: **62416**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.8	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 GW Annual

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62416**	RunNo: **62416**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.7	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62438**	RunNo: **62438**
Prep Date:	Analysis Date: **8/27/2019**	SeqNo: **2123335** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.6	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.7	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62438**	RunNo: **62438**
Prep Date:	Analysis Date: **8/27/2019**	SeqNo: **2123336** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 GW Annual

Sample ID: **LCS-47000** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSW** Batch ID: **47000** RunNo: **62456**

Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	9.4	10	20.00	0	47.0	32.2	94			J
4-Chloro-3-methylphenol	21	10	40.00	0	51.8	37.7	101			
2-Chlorophenol	21	10	40.00	0	51.7	32.6	90.1			
1,4-Dichlorobenzene	11	10	20.00	0	53.7	30	87.2			
2,4-Dinitrotoluene	7.7	10	20.00	0	38.7	35.9	85.8			J
N-Nitrosodi-n-propylamine	12	10	20.00	0	58.2	37.1	108			
4-Nitrophenol	20	10	40.00	0	50.4	22.4	86.6			
Pentachlorophenol	16	20	40.00	0	38.9	31.6	91			J
Phenol	22	10	40.00	0	56.1	21.7	84.9			
Pyrene	9.5	10	20.00	0	47.6	46.3	103			J
1,2,4-Trichlorobenzene	11	10	20.00	0	53.9	30.2	88.3			
Surr: 2-Fluorophenol	130		200.0		65.1	15	101			
Surr: Phenol-d5	100		200.0		50.0	15	84.6			
Surr: 2,4,6-Tribromophenol	190		200.0		95.5	27.8	112			
Surr: Nitrobenzene-d5	95		100.0		94.9	33	113			
Surr: 2-Fluorobiphenyl	86		100.0		85.9	26.6	107			
Surr: 4-Terphenyl-d14	100		100.0		103	18.7	148			

Sample ID: **MB-47000** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **PBW** Batch ID: **47000** RunNo: **62456**

Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123971** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-47000** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **47000** RunNo: **62456**
Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123971** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 GW Annual

Sample ID: **MB-47000** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **47000** RunNo: **62456**
Prep Date: **8/23/2019** Analysis Date: **8/27/2019** SeqNo: **2123971** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		64.6	15	101			
Surr: Phenol-d5	98		200.0		48.8	15	84.6			
Surr: 2,4,6-Tribromophenol	140		200.0		69.2	27.8	112			
Surr: Nitrobenzene-d5	85		100.0		85.1	33	113			
Surr: 2-Fluorobiphenyl	73		100.0		73.1	26.6	107			
Surr: 4-Terphenyl-d14	78		100.0		78.4	18.7	148			

Sample ID: **lcsd-47000** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **47000** RunNo: **62473**
Prep Date: **8/23/2019** Analysis Date: **8/28/2019** SeqNo: **2125061** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	15	10	20.00	0	74.8	32.2	94	45.6	32.9	R
4-Chloro-3-methylphenol	32	10	40.00	0	79.6	37.7	101	42.3	29.9	R
2-Chlorophenol	33	10	40.00	0	83.2	32.6	90.1	46.6	28.5	R
1,4-Dichlorobenzene	15	10	20.00	0	76.1	15	87.2	34.5	44.9	
2,4-Dinitrotoluene	13	10	20.00	0	63.5	35.9	85.8	48.5	28.5	R
N-Nitrosodi-n-propylamine	16	10	20.00	0	80.9	37.1	108	32.6	29.9	R
4-Nitrophenol	28	10	40.00	0	70.2	15	86.6	32.9	68	
Pentachlorophenol	24	20	40.00	0	59.2	31.6	91	41.4	39.5	R
Phenol	34	10	40.00	0	86.2	15	84.9	42.3	44.2	S
Pyrene	13	10	20.00	0	67.2	46.3	103	34.1	23.8	R
1,2,4-Trichlorobenzene	15	10	20.00	0	75.6	15.7	88.3	33.5	38	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 GW Annual

Sample ID: **lcsd-47000** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSS02** Batch ID: **47000** RunNo: **62473**

Prep Date: **8/23/2019** Analysis Date: **8/28/2019** SeqNo: **2125061** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	88		200.0		44.0	15	101	0	0	
Surr: Phenol-d5	74		200.0		37.1	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		73.5	27.8	112	0	0	
Surr: Nitrobenzene-d5	67		100.0		67.0	33	113	0	0	
Surr: 2-Fluorobiphenyl	59		100.0		59.0	26.6	107	0	0	
Surr: 4-Terphenyl-d14	83		100.0		83.3	18.7	148	0	0	

Sample ID: **LCS-47185** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSW** Batch ID: **47185** RunNo: **62883**

Prep Date: **8/30/2019** Analysis Date: **9/12/2019** SeqNo: **2143011** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	90		200.0		45.1	15	101			
Surr: Phenol-d5	82		200.0		40.9	15	84.6			
Surr: 2,4,6-Tribromophenol	100		200.0		50.8	27.8	112			
Surr: Nitrobenzene-d5	56		100.0		55.6	33	113			
Surr: 2-Fluorobiphenyl	51		100.0		51.2	26.6	107			
Surr: 4-Terphenyl-d14	71		100.0		71.2	18.7	148			

Sample ID: **lcs-47316** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSW** Batch ID: **47316** RunNo: **62883**

Prep Date: **9/6/2019** Analysis Date: **9/12/2019** SeqNo: **2143013** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	92		200.0		45.8	15	101			
Surr: Phenol-d5	72		200.0		35.9	15	84.6			
Surr: 2,4,6-Tribromophenol	110		200.0		53.1	27.8	112			
Surr: Nitrobenzene-d5	67		100.0		66.9	33	113			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	26.6	107			
Surr: 4-Terphenyl-d14	54		100.0		54.1	18.7	148			

Sample ID: **LCSD-47185** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSS02** Batch ID: **47185** RunNo: **62883**

Prep Date: **8/30/2019** Analysis Date: **9/12/2019** SeqNo: **2143014** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		56.1	15	101	0	0	
Surr: Phenol-d5	100		200.0		49.8	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		70.9	27.8	112	0	0	
Surr: Nitrobenzene-d5	83		100.0		82.6	33	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D36**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 GW Annual

Sample ID: **LCSD-47185** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSS02** Batch ID: **47185** RunNo: **62883**

Prep Date: **8/30/2019** Analysis Date: **9/12/2019** SeqNo: **2143014** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	72		100.0		71.6	26.6	107	0	0	
Surr: 4-Terphenyl-d14	90		100.0		89.8	18.7	148	0	0	

Sample ID: **lcsd-47316** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSS02** Batch ID: **47316** RunNo: **62883**

Prep Date: **9/6/2019** Analysis Date: **9/12/2019** SeqNo: **2143016** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		58.8	15	101	0	0	
Surr: Phenol-d5	92		200.0		46.1	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		66.7	27.8	112	0	0	
Surr: Nitrobenzene-d5	82		100.0		82.4	33	113	0	0	
Surr: 2-Fluorobiphenyl	80		100.0		80.3	26.6	107	0	0	
Surr: 4-Terphenyl-d14	68		100.0		67.9	18.7	148	0	0	

Sample ID: **MB-47185** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **PBW** Batch ID: **47185** RunNo: **62883**

Prep Date: **8/30/2019** Analysis Date: **9/12/2019** SeqNo: **2143017** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		55.3	15	101			
Surr: Phenol-d5	83		200.0		41.3	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		61.8	27.8	112			
Surr: Nitrobenzene-d5	79		100.0		79.1	33	113			
Surr: 2-Fluorobiphenyl	66		100.0		65.5	26.6	107			
Surr: 4-Terphenyl-d14	75		100.0		75.5	18.7	148			

Sample ID: **mb-47316** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **PBW** Batch ID: **47316** RunNo: **62883**

Prep Date: **9/6/2019** Analysis Date: **9/12/2019** SeqNo: **2143019** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	81		200.0		40.4	15	101			
Surr: Phenol-d5	62		200.0		30.9	15	84.6			
Surr: 2,4,6-Tribromophenol	92		200.0		45.8	27.8	112			
Surr: Nitrobenzene-d5	54		100.0		53.9	33	113			
Surr: 2-Fluorobiphenyl	48		100.0		48.0	26.6	107			
Surr: 4-Terphenyl-d14	49		100.0		49.1	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1908D36** RcptNo: **1**

Received By: **Desiree Dominguez** **8/21/2019 4:50:00 PM** DD

Completed By: **Leah Baca** **8/22/2019 1:20:01 PM** Leah Baca

Reviewed By: DAD 8/22/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	Samples were collected the same day and chilled.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 18
(<2 or >12 unless noted)
Adjusted? no
Checked by: DM 8/22/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Yes			
2	5.8	Good	Yes			
3	6.6	Good	Yes			
4	55	Good	Yes			

Chain-of-Custody Record

Client: Marathon

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 2019 GW Annual

Project #: OW wells

Project Manager: Brian Moore

Sampler: CJohnson

On Ice: ☒ Yes ☐ No

Sample Temperature: See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1908D36	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015D (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Total Metals T+D	Cations			Air Bubbles (Y or N)
8/21/19	0836	AQ	OW-57	Misc	Misc	-001		X	X			X		X		X		X	X			
	1302	AQ	OW-56			-002			X			X		X		X		X	X			
	1230	AQ	OW-54			-003			X			X		X		X		X	X			
	1208	AQ	OW-59			-004			X			X		X		X		X	X			
	1140	AQ	STP1-NW			-005			X			X		X		X		X	X			
	1230	AQ	Duplicate			-006			X			X		X		X		X	X			

8270 full list per chart 8/23/19

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/19	1442			8/21/19	1443
Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/19	1750		CDO	8/21/19	16:50

Remarks: 8260, 8015D, WC&C Metals (T+D), Cations, Anions, 8270

4.1+0.2=4.9°C 6.4+0.2=6.6°C
5.6+0.2=5.8°C 5.3+0.2=5.5°C

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 26, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2019 Annual 3rd QTR GW Sampling OrderNo.: 1908D65

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/22/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 7:00:00 AM
Lab ID: 1908D65-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Acetone	ND	1.2	10		µg/L	1	8/27/2019 11:30:00 AM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 11:30:00 AM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 11:30:00 AM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 11:30:00 AM	R62438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 7:00:00 AM
Lab ID: 1908D65-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 11:30:00 AM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 11:30:00 AM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 11:30:00 AM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 11:30:00 AM	R62438
Surr: 1,2-Dichloroethane-d4	97.6	0	70-130		%Rec	1	8/27/2019 11:30:00 AM	R62438
Surr: 4-Bromofluorobenzene	96.9	0	70-130		%Rec	1	8/27/2019 11:30:00 AM	R62438
Surr: Dibromofluoromethane	94.5	0	70-130		%Rec	1	8/27/2019 11:30:00 AM	R62438
Surr: Toluene-d8	96.6	0	70-130		%Rec	1	8/27/2019 11:30:00 AM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 7:00:00 AM
Lab ID: 1908D65-002
Matrix: TRIP BLANK
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Toluene	0.50	0.35	1.0	J	µg/L	1	8/27/2019 11:54:00 AM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Acetone	ND	1.2	10		µg/L	1	8/27/2019 11:54:00 AM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 11:54:00 AM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 11:54:00 AM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Chlorobenzene	0.62	0.19	1.0	J	µg/L	1	8/27/2019 11:54:00 AM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 11:54:00 AM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 7:00:00 AM
Lab ID: 1908D65-002
Matrix: TRIP BLANK
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 11:54:00 AM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 11:54:00 AM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 11:54:00 AM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 11:54:00 AM	R62438
Surr: 1,2-Dichloroethane-d4	95.6	0	70-130		%Rec	1	8/27/2019 11:54:00 AM	R62438
Surr: 4-Bromofluorobenzene	98.0	0	70-130		%Rec	1	8/27/2019 11:54:00 AM	R62438
Surr: Dibromofluoromethane	97.4	0	70-130		%Rec	1	8/27/2019 11:54:00 AM	R62438
Surr: Toluene-d8	95.3	0	70-130		%Rec	1	8/27/2019 11:54:00 AM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 8:55:00 AM
Lab ID: 1908D65-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	2.0	0.35	1.0		mg/L	1	8/28/2019 12:40:23 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 12:40:23 AM	47050
Surr: DNOP	108	0	70-130		%Rec	1	8/28/2019 12:40:23 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.0	0.021	0.050		mg/L	1	8/26/2019 9:14:45 PM	R62420
Surr: BFB	270	0	65.8-143	S	%Rec	1	8/26/2019 9:14:45 PM	R62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.1	0.073	0.50		mg/L	5	8/23/2019 5:54:46 PM	R62406
Chloride	180	10	10		mg/L	20	8/23/2019 6:07:39 PM	R62406
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/23/2019 5:54:46 PM	R62406
Bromide	0.87	0.089	0.50		mg/L	5	8/23/2019 5:54:46 PM	R62406
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 5:54:46 PM	R62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 5:54:46 PM	R62406
Sulfate	0.97	0.33	2.5	J	mg/L	5	8/23/2019 5:54:46 PM	R62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 12:47:35 PM	B62943
Barium	1.7	0.0032	0.010		mg/L	5	9/14/2019 12:49:33 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:47:35 PM	B62943
Boron	0.74	0.0045	0.040		mg/L	1	9/14/2019 12:47:35 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:47:35 PM	B62943
Calcium	58	0.062	1.0		mg/L	1	9/14/2019 12:47:35 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:47:35 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 12:47:35 PM	B62943
Copper	ND	0.0013	0.0060		mg/L	1	9/14/2019 12:47:35 PM	B62943
Iron	1.4	0.044	0.10	*	mg/L	5	9/14/2019 12:49:33 PM	B62943
Magnesium	11	0.050	1.0		mg/L	1	9/14/2019 12:47:35 PM	B62943
Manganese	0.82	0.00029	0.0020	*	mg/L	1	9/14/2019 12:47:35 PM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 12:47:35 PM	B62943
Nickel	0.014	0.0040	0.010		mg/L	1	9/14/2019 12:47:35 PM	B62943
Potassium	0.18	0.16	1.0	J	mg/L	1	9/14/2019 12:47:35 PM	B62943
Silver	ND	0.00094	0.0050		mg/L	1	9/14/2019 12:47:35 PM	B62943
Sodium	320	2.1	5.0		mg/L	5	9/14/2019 12:49:33 PM	B62943
Zinc	0.0079	0.0023	0.010	J	mg/L	1	9/14/2019 12:47:35 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.0	0.012	0.10	*	mg/L	5	9/12/2019 9:58:25 AM	47376
Barium	1.9	0.0032	0.010		mg/L	5	9/9/2019 4:51:44 PM	47301
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 4:49:46 PM	47301

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 8:55:00 AM
Lab ID: 1908D65-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.75	0.0045	0.040		mg/L	1	9/9/2019 4:49:46 PM	47301
Cadmium	ND	0.00074	0.0020		mg/L	1	9/9/2019 4:49:46 PM	47301
Chromium	ND	0.0015	0.0060		mg/L	1	9/9/2019 4:49:46 PM	47301
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 4:49:46 PM	47301
Copper	0.0042	0.0041	0.0060	J	mg/L	1	9/9/2019 4:49:46 PM	47301
Iron	3.2	0.044	0.10	*	mg/L	5	9/9/2019 4:51:44 PM	47301
Manganese	0.89	0.00029	0.0020	*	mg/L	1	9/9/2019 4:49:46 PM	47301
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/9/2019 4:49:46 PM	47301
Nickel	0.016	0.0040	0.010		mg/L	1	9/9/2019 4:49:46 PM	47301
Silver	ND	0.0014	0.0050		mg/L	1	9/9/2019 4:49:46 PM	47301
Zinc	0.0064	0.0058	0.010	J	mg/L	1	9/9/2019 4:49:46 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:31:29 PM	A62791
Arsenic	0.0030	0.00010	0.0010		mg/L	1	9/4/2019 6:02:33 PM	C62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 6:02:33 PM	C62654
Selenium	0.00027	0.00017	0.0010	J	mg/L	1	9/4/2019 6:02:33 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 6:02:33 PM	C62654
Uranium	0.00019	0.000075	0.00050	J	mg/L	1	9/4/2019 6:02:33 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 6:33:07 PM	47295
Arsenic	0.0044	0.00031	0.0010		mg/L	1	9/5/2019 6:33:07 PM	47295
Lead	0.0021	0.000055	0.00050		mg/L	1	9/5/2019 6:33:07 PM	47295
Selenium	ND	0.00048	0.0010		mg/L	1	9/5/2019 6:33:07 PM	47295
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 6:33:07 PM	47295
Uranium	0.00021	0.000085	0.00050	J	mg/L	1	9/5/2019 6:33:07 PM	47295
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/12/2019 4:40:48 PM	47429
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	4.8	3.0	10	J	µg/L	1	8/29/2019 3:53:41 PM	47026
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Aniline	ND	3.6	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 3:53:41 PM	47026

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 8:55:00 AM
Lab ID: 1908D65-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 3:53:41 PM	47026
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 3:53:41 PM	47026
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 3:53:41 PM	47026
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 3:53:41 PM	47026
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 3:53:41 PM	47026
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 3:53:41 PM	47026
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 3:53:41 PM	47026
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 3:53:41 PM	47026
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 3:53:41 PM	47026
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 3:53:41 PM	47026
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 3:53:41 PM	47026

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 8:55:00 AM
Lab ID: 1908D65-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
1-Methylnaphthalene	16	3.1	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 3:53:41 PM	47026
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 3:53:41 PM	47026
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 3:53:41 PM	47026
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Naphthalene	13	4.1	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 3:53:41 PM	47026
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 3:53:41 PM	47026
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 3:53:41 PM	47026
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Phenol	ND	8.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 3:53:41 PM	47026
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 3:53:41 PM	47026
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 3:53:41 PM	47026
Surr: 2-Fluorophenol	53.4	0	15-101		%Rec	1	8/29/2019 3:53:41 PM	47026
Surr: Phenol-d5	45.4	0	15-84.6		%Rec	1	8/29/2019 3:53:41 PM	47026
Surr: 2,4,6-Tribromophenol	72.6	0	27.8-112		%Rec	1	8/29/2019 3:53:41 PM	47026
Surr: Nitrobenzene-d5	90.0	0	33-113		%Rec	1	8/29/2019 3:53:41 PM	47026
Surr: 2-Fluorobiphenyl	81.8	0	26.6-107		%Rec	1	8/29/2019 3:53:41 PM	47026
Surr: 4-Terphenyl-d14	75.3	0	18.7-148		%Rec	1	8/29/2019 3:53:41 PM	47026
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	220	1.7	10		µg/L	10	8/27/2019 12:19:00 PM	R62438
Toluene	0.45	0.35	1.0	J	µg/L	1	8/27/2019 12:43:00 PM	R62438
Ethylbenzene	44	0.13	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Methyl tert-butyl ether (MTBE)	110	0.46	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2,4-Trimethylbenzene	0.32	0.21	1.0	J	µg/L	1	8/27/2019 12:43:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Naphthalene	15	0.28	2.0		µg/L	1	8/27/2019 12:43:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 8:55:00 AM
Lab ID: 1908D65-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	24	0.31	4.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
2-Methylnaphthalene	4.8	0.35	4.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Acetone	4.1	1.2	10	J	µg/L	1	8/27/2019 12:43:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 12:43:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 12:43:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 12:43:00 PM	R62438
Isopropylbenzene	9.1	0.19	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 12:43:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
n-Butylbenzene	1.6	0.23	3.0	J	µg/L	1	8/27/2019 12:43:00 PM	R62438
n-Propylbenzene	4.7	0.21	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-2
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 8:55:00 AM
Lab ID: 1908D65-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	2.4	0.25	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
tert-Butylbenzene	0.49	0.21	1.0	J	µg/L	1	8/27/2019 12:43:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 12:43:00 PM	R62438
Xylenes, Total	0.85	0.45	1.5	J	µg/L	1	8/27/2019 12:43:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	93.7	0	70-130		%Rec	1	8/27/2019 12:43:00 PM	R62438
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	8/27/2019 12:43:00 PM	R62438
Surr: Dibromofluoromethane	92.1	0	70-130		%Rec	1	8/27/2019 12:43:00 PM	R62438
Surr: Toluene-d8	95.9	0	70-130		%Rec	1	8/27/2019 12:43:00 PM	R62438

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 9:35:00 AM
Lab ID: 1908D65-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	1.2	0.35	1.0		mg/L	1	8/28/2019 1:02:44 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 1:02:44 AM	47050
Surr: DNOP	112	0	70-130		%Rec	1	8/28/2019 1:02:44 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.99	0.021	0.050		mg/L	1	8/26/2019 9:37:38 PM	B62420
Surr: BFB	190	0	65.8-143	S	%Rec	1	8/26/2019 9:37:38 PM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.98	0.073	0.50		mg/L	5	8/23/2019 6:20:31 PM	R62406
Chloride	240	10	10		mg/L	20	8/23/2019 6:33:23 PM	R62406
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/23/2019 6:20:31 PM	R62406
Bromide	1.8	0.089	0.50		mg/L	5	8/23/2019 6:20:31 PM	R62406
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 6:20:31 PM	R62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 6:20:31 PM	R62406
Sulfate	9.0	0.33	2.5		mg/L	5	8/23/2019 6:20:31 PM	R62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/14/2019 12:53:56 PM	B62943
Barium	1.5	0.0065	0.020		mg/L	10	9/14/2019 12:55:52 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:53:56 PM	B62943
Boron	0.71	0.0045	0.040		mg/L	1	9/14/2019 12:53:56 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:53:56 PM	B62943
Calcium	110	0.62	10		mg/L	10	9/14/2019 12:55:52 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:53:56 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 12:53:56 PM	B62943
Copper	ND	0.0013	0.0060		mg/L	1	9/14/2019 12:53:56 PM	B62943
Iron	0.81	0.0087	0.020	*	mg/L	1	9/14/2019 12:53:56 PM	B62943
Magnesium	19	0.050	1.0		mg/L	1	9/14/2019 12:53:56 PM	B62943
Manganese	1.7	0.0029	0.020	*	mg/L	10	9/14/2019 12:55:52 PM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 12:53:56 PM	B62943
Nickel	0.027	0.0040	0.010		mg/L	1	9/14/2019 12:53:56 PM	B62943
Potassium	0.39	0.16	1.0	J	mg/L	1	9/14/2019 12:53:56 PM	B62943
Silver	0.0017	0.00094	0.0050	J	mg/L	1	9/14/2019 12:53:56 PM	B62943
Sodium	370	4.2	10		mg/L	10	9/14/2019 12:55:52 PM	B62943
Zinc	0.0079	0.0023	0.010	J	mg/L	1	9/14/2019 12:53:56 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.1	0.012	0.10	*	mg/L	5	9/12/2019 10:00:20 AM	47376
Barium	1.5	0.0032	0.010		mg/L	5	9/9/2019 5:01:42 PM	47301
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 4:55:45 PM	47301

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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 9:35:00 AM
Lab ID: 1908D65-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.70	0.023	0.20		mg/L	5	9/9/2019 5:01:42 PM	47301
Cadmium	ND	0.00074	0.0020		mg/L	1	9/9/2019 4:55:45 PM	47301
Chromium	ND	0.0015	0.0060		mg/L	1	9/9/2019 4:55:45 PM	47301
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 4:55:45 PM	47301
Copper	ND	0.0041	0.0060		mg/L	1	9/9/2019 4:55:45 PM	47301
Iron	1.6	0.044	0.10	*	mg/L	5	9/9/2019 5:01:42 PM	47301
Manganese	1.7	0.0014	0.010	*	mg/L	5	9/9/2019 5:01:42 PM	47301
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/9/2019 4:55:45 PM	47301
Nickel	0.025	0.0040	0.010		mg/L	1	9/9/2019 4:55:45 PM	47301
Silver	0.0017	0.0014	0.0050	J	mg/L	1	9/9/2019 4:55:45 PM	47301
Zinc	ND	0.0058	0.010		mg/L	1	9/9/2019 4:55:45 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:34:11 PM	A62791
Arsenic	0.0060	0.00010	0.0010		mg/L	1	9/4/2019 6:05:15 PM	C62654
Lead	0.00010	0.000055	0.00050	J	mg/L	1	9/4/2019 6:05:15 PM	C62654
Selenium	0.00031	0.00017	0.0010	J	mg/L	1	9/4/2019 6:05:15 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 6:05:15 PM	C62654
Uranium	0.0051	0.000075	0.00050		mg/L	1	9/4/2019 6:05:15 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 6:41:53 PM	47301
Arsenic	0.0067	0.00031	0.0010		mg/L	1	9/5/2019 6:41:53 PM	47301
Lead	0.0010	0.000055	0.00050		mg/L	1	9/5/2019 6:41:53 PM	47301
Selenium	0.00057	0.00048	0.0010	J	mg/L	1	9/5/2019 6:41:53 PM	47301
Thallium	0.000058	0.000052	0.00050	J	mg/L	1	9/5/2019 6:41:53 PM	47301
Uranium	0.0048	0.000085	0.00050		mg/L	1	9/5/2019 6:41:53 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/12/2019 4:43:06 PM	47429
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Aniline	ND	3.6	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 4:23:24 PM	47026

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 9:35:00 AM
Lab ID: 1908D65-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 4:23:24 PM	47026
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 4:23:24 PM	47026
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 4:23:24 PM	47026
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 4:23:24 PM	47026
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 4:23:24 PM	47026
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 4:23:24 PM	47026
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 4:23:24 PM	47026
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 4:23:24 PM	47026
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 4:23:24 PM	47026
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 4:23:24 PM	47026
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 4:23:24 PM	47026

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 9:35:00 AM
Lab ID: 1908D65-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
1-Methylnaphthalene	14	3.1	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2-Methylnaphthalene	7.1	3.0	10	J	µg/L	1	8/29/2019 4:23:24 PM	47026
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 4:23:24 PM	47026
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 4:23:24 PM	47026
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 4:23:24 PM	47026
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Naphthalene	12	4.1	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 4:23:24 PM	47026
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 4:23:24 PM	47026
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 4:23:24 PM	47026
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Phenol	ND	8.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 4:23:24 PM	47026
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 4:23:24 PM	47026
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 4:23:24 PM	47026
Surr: 2-Fluorophenol	45.4	0	15-101		%Rec	1	8/29/2019 4:23:24 PM	47026
Surr: Phenol-d5	36.0	0	15-84.6		%Rec	1	8/29/2019 4:23:24 PM	47026
Surr: 2,4,6-Tribromophenol	59.7	0	27.8-112		%Rec	1	8/29/2019 4:23:24 PM	47026
Surr: Nitrobenzene-d5	77.5	0	33-113		%Rec	1	8/29/2019 4:23:24 PM	47026
Surr: 2-Fluorobiphenyl	64.6	0	26.6-107		%Rec	1	8/29/2019 4:23:24 PM	47026
Surr: 4-Terphenyl-d14	67.0	0	18.7-148		%Rec	1	8/29/2019 4:23:24 PM	47026
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	380	1.7	10		µg/L	10	8/27/2019 1:07:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Ethylbenzene	48	0.13	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Methyl tert-butyl ether (MTBE)	68	0.46	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Naphthalene	15	0.28	2.0		µg/L	1	8/27/2019 1:32:00 PM	R62438

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CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 9:35:00 AM
Lab ID: 1908D65-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	19	0.31	4.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
2-Methylnaphthalene	11	0.35	4.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Acetone	3.9	1.2	10	J	µg/L	1	8/27/2019 1:32:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 1:32:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 1:32:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 1:32:00 PM	R62438
Isopropylbenzene	4.8	0.19	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 1:32:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
n-Butylbenzene	1.2	0.23	3.0	J	µg/L	1	8/27/2019 1:32:00 PM	R62438
n-Propylbenzene	4.0	0.21	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: KA-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 9:35:00 AM
Lab ID: 1908D65-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	1.1	0.25	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
tert-Butylbenzene	0.40	0.21	1.0	J	µg/L	1	8/27/2019 1:32:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 1:32:00 PM	R62438
Xylenes, Total	0.62	0.45	1.5	J	µg/L	1	8/27/2019 1:32:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	95.5	0	70-130		%Rec	1	8/27/2019 1:32:00 PM	R62438
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	8/27/2019 1:32:00 PM	R62438
Surr: Dibromofluoromethane	93.1	0	70-130		%Rec	1	8/27/2019 1:32:00 PM	R62438
Surr: Toluene-d8	97.1	0	70-130		%Rec	1	8/27/2019 1:32:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:30:00 AM
Lab ID: 1908D65-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/27/2019 11:28:04 PM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 11:28:04 PM	47050
Surr: DNOP	122	0	70-130		%Rec	1	8/27/2019 11:28:04 PM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.026	0.021	0.050	J	mg/L	1	8/26/2019 10:00:32 PM	B62420
Surr: BFB	101	0	65.8-143		%Rec	1	8/26/2019 10:00:32 PM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.63	0.073	0.50		mg/L	5	8/23/2019 7:12:05 PM	R62406
Chloride	420	25	25		mg/L	50	9/7/2019 11:26:07 AM	R62751
Nitrogen, Nitrite (As N)	0.17	0.027	0.50	J	mg/L	5	8/23/2019 7:12:05 PM	R62406
Bromide	2.5	0.089	0.50		mg/L	5	8/23/2019 7:12:05 PM	R62406
Nitrogen, Nitrate (As N)	0.63	0.025	0.50		mg/L	5	8/23/2019 7:12:05 PM	R62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 7:12:05 PM	R62406
Sulfate	170	0.33	2.5		mg/L	5	8/23/2019 7:12:05 PM	R62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.082	0.0025	0.020		mg/L	1	9/14/2019 12:58:02 PM	B62943
Barium	0.084	0.00065	0.0020		mg/L	1	9/14/2019 12:58:02 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 12:58:02 PM	B62943
Boron	2.3	0.023	0.20		mg/L	5	9/14/2019 1:00:08 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 12:58:02 PM	B62943
Calcium	18	0.062	1.0		mg/L	1	9/14/2019 12:58:02 PM	B62943
Chromium	ND	0.0015	0.0060		mg/L	1	9/14/2019 12:58:02 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 12:58:02 PM	B62943
Copper	0.0065	0.0013	0.0060		mg/L	1	9/14/2019 12:58:02 PM	B62943
Iron	0.039	0.0087	0.020		mg/L	1	9/14/2019 12:58:02 PM	B62943
Magnesium	3.0	0.050	1.0		mg/L	1	9/14/2019 12:58:02 PM	B62943
Manganese	0.063	0.00029	0.0020	*	mg/L	1	9/14/2019 12:58:02 PM	B62943
Molybdenum	0.0070	0.0067	0.0080	J	mg/L	1	9/14/2019 12:58:02 PM	B62943
Nickel	0.018	0.0040	0.010		mg/L	1	9/14/2019 12:58:02 PM	B62943
Potassium	2.1	0.16	1.0		mg/L	1	9/14/2019 12:58:02 PM	B62943
Silver	ND	0.00094	0.0050		mg/L	1	9/14/2019 12:58:02 PM	B62943
Sodium	670	8.3	20		mg/L	20	9/14/2019 1:02:06 PM	B62943
Zinc	0.018	0.0023	0.010		mg/L	1	9/14/2019 12:58:02 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	6.4	0.025	0.20	*	mg/L	10	9/12/2019 10:02:28 AM	47376
Barium	0.21	0.00065	0.0020		mg/L	1	9/9/2019 5:16:37 PM	47301
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 5:16:37 PM	47301

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:30:00 AM
Lab ID: 1908D65-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	2.4	0.023	0.20		mg/L	5	9/9/2019 5:22:34 PM	47301
Cadmium	ND	0.00074	0.0020		mg/L	1	9/9/2019 5:16:37 PM	47301
Chromium	0.0073	0.0015	0.0060		mg/L	1	9/9/2019 5:16:37 PM	47301
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 5:16:37 PM	47301
Copper	0.0093	0.0041	0.0060		mg/L	1	9/9/2019 5:16:37 PM	47301
Iron	3.3	0.17	0.40	*	mg/L	20	9/9/2019 5:28:01 PM	47301
Manganese	0.21	0.00029	0.0020	*	mg/L	1	9/9/2019 5:16:37 PM	47301
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/9/2019 5:16:37 PM	47301
Nickel	0.020	0.0040	0.010		mg/L	1	9/9/2019 5:16:37 PM	47301
Silver	ND	0.0014	0.0050		mg/L	1	9/9/2019 5:16:37 PM	47301
Zinc	0.073	0.0058	0.010		mg/L	1	9/9/2019 5:16:37 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00087	0.00039	0.0010	J	mg/L	1	9/9/2019 5:36:52 PM	A62791
Arsenic	0.0014	0.00010	0.0010		mg/L	1	9/4/2019 6:07:58 PM	C62654
Lead	0.00014	0.000055	0.00050	J	mg/L	1	9/4/2019 6:07:58 PM	C62654
Selenium	0.0025	0.00017	0.0010		mg/L	1	9/4/2019 6:07:58 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 6:07:58 PM	C62654
Uranium	0.036	0.00037	0.0025	*	mg/L	5	9/9/2019 5:39:34 PM	A62791
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	0.00068	0.00039	0.0010	J	mg/L	1	9/5/2019 6:44:03 PM	47301
Arsenic	0.0021	0.00031	0.0010		mg/L	1	9/5/2019 6:44:03 PM	47301
Lead	0.0042	0.000055	0.00050		mg/L	1	9/5/2019 6:44:03 PM	47301
Selenium	0.0037	0.00048	0.0010		mg/L	1	9/5/2019 6:44:03 PM	47301
Thallium	0.000063	0.000052	0.00050	J	mg/L	1	9/5/2019 6:44:03 PM	47301
Uranium	0.041	0.00042	0.0025	*	mg/L	5	9/13/2019 6:00:22 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00015	0.000038	0.00020	J	mg/L	1	9/12/2019 4:45:17 PM	47429
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Aniline	ND	3.6	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 4:52:51 PM	47026

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:30:00 AM
Lab ID: 1908D65-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 4:52:51 PM	47026
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 4:52:51 PM	47026
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 4:52:51 PM	47026
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 4:52:51 PM	47026
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 4:52:51 PM	47026
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 4:52:51 PM	47026
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 4:52:51 PM	47026
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 4:52:51 PM	47026
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 4:52:51 PM	47026
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 4:52:51 PM	47026
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 4:52:51 PM	47026

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:30:00 AM
Lab ID: 1908D65-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 4:52:51 PM	47026
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 4:52:51 PM	47026
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 4:52:51 PM	47026
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Naphthalene	ND	4.1	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 4:52:51 PM	47026
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 4:52:51 PM	47026
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 4:52:51 PM	47026
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Phenol	ND	8.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 4:52:51 PM	47026
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 4:52:51 PM	47026
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 4:52:51 PM	47026
Surr: 2-Fluorophenol	56.2	0	15-101		%Rec	1	8/29/2019 4:52:51 PM	47026
Surr: Phenol-d5	44.5	0	15-84.6		%Rec	1	8/29/2019 4:52:51 PM	47026
Surr: 2,4,6-Tribromophenol	74.3	0	27.8-112		%Rec	1	8/29/2019 4:52:51 PM	47026
Surr: Nitrobenzene-d5	91.1	0	33-113		%Rec	1	8/29/2019 4:52:51 PM	47026
Surr: 2-Fluorobiphenyl	78.7	0	26.6-107		%Rec	1	8/29/2019 4:52:51 PM	47026
Surr: 4-Terphenyl-d14	76.7	0	18.7-148		%Rec	1	8/29/2019 4:52:51 PM	47026
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	0.54	0.17	1.0	J	µg/L	1	8/27/2019 1:56:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Methyl tert-butyl ether (MTBE)	30	0.46	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 1:56:00 PM	R62438

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Qualifiers:

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B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:30:00 AM
Lab ID: 1908D65-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	1.1	0.31	4.0	J	µg/L	1	8/27/2019 1:56:00 PM	R62438
2-Methylnaphthalene	1.1	0.35	4.0	J	µg/L	1	8/27/2019 1:56:00 PM	R62438
Acetone	2.4	1.2	10	J	µg/L	1	8/27/2019 1:56:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 1:56:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 1:56:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 1:56:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 1:56:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Napis-3
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:30:00 AM
Lab ID: 1908D65-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 1:56:00 PM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 1:56:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	98.1	0	70-130		%Rec	1	8/27/2019 1:56:00 PM	R62438
Surr: 4-Bromofluorobenzene	99.2	0	70-130		%Rec	1	8/27/2019 1:56:00 PM	R62438
Surr: Dibromofluoromethane	96.9	0	70-130		%Rec	1	8/27/2019 1:56:00 PM	R62438
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	8/27/2019 1:56:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	12	0.35	1.0		mg/L	1	8/28/2019 1:24:52 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 1:24:52 AM	47050
Surr: DNOP	118	0	70-130		%Rec	1	8/28/2019 1:24:52 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.97	0.021	0.050		mg/L	1	8/26/2019 10:23:30 PM	B62420
Surr: BFB	299	0	65.8-143	S	%Rec	1	8/26/2019 10:23:30 PM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.073	0.50		mg/L	5	8/23/2019 7:37:44 PM	R62406
Chloride	1500	50	50		mg/L	100	9/7/2019 11:38:27 AM	R62751
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/23/2019 7:37:44 PM	R62406
Bromide	3.7	0.089	0.50		mg/L	5	8/23/2019 7:37:44 PM	R62406
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 7:37:44 PM	R62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 7:37:44 PM	R62406
Sulfate	4.8	0.33	2.5		mg/L	5	8/23/2019 7:37:44 PM	R62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	9/14/2019 1:04:17 PM	B62943
Barium	1.0	0.0032	0.010		mg/L	5	9/14/2019 1:04:17 PM	B62943
Beryllium	ND	0.0014	0.010		mg/L	5	9/14/2019 1:04:17 PM	B62943
Boron	1.6	0.023	0.20		mg/L	5	9/14/2019 1:04:17 PM	B62943
Cadmium	ND	0.0028	0.010		mg/L	5	9/14/2019 1:04:17 PM	B62943
Calcium	150	0.31	5.0		mg/L	5	9/14/2019 1:04:17 PM	B62943
Chromium	ND	0.0077	0.030		mg/L	5	9/14/2019 1:04:17 PM	B62943
Cobalt	ND	0.015	0.030		mg/L	5	9/14/2019 1:04:17 PM	B62943
Copper	0.0068	0.0065	0.030	J	mg/L	5	9/14/2019 1:04:17 PM	B62943
Iron	6.0	0.44	1.0	*	mg/L	50	9/14/2019 1:06:13 PM	B62943
Magnesium	28	0.25	5.0		mg/L	5	9/14/2019 1:04:17 PM	B62943
Manganese	1.6	0.0014	0.010	*	mg/L	5	9/14/2019 1:04:17 PM	B62943
Molybdenum	ND	0.034	0.040		mg/L	5	9/14/2019 1:04:17 PM	B62943
Nickel	0.17	0.020	0.050	*	mg/L	5	9/14/2019 1:04:17 PM	B62943
Potassium	2.9	0.81	5.0	J	mg/L	5	9/14/2019 1:04:17 PM	B62943
Silver	ND	0.0047	0.025		mg/L	5	9/14/2019 1:04:17 PM	B62943
Sodium	1300	21	50		mg/L	50	9/14/2019 1:06:13 PM	B62943
Zinc	ND	0.011	0.050		mg/L	5	9/14/2019 1:04:17 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	2.2	0.012	0.10	*	mg/L	5	9/12/2019 10:04:29 AM	47376
Barium	1.1	0.0032	0.010		mg/L	5	9/9/2019 5:30:02 PM	47301
Beryllium	ND	0.0014	0.010		mg/L	5	9/9/2019 5:30:02 PM	47301

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.6	0.023	0.20		mg/L	5	9/9/2019 5:30:02 PM	47301
Cadmium	ND	0.0037	0.010		mg/L	5	9/9/2019 5:30:02 PM	47301
Chromium	ND	0.0077	0.030		mg/L	5	9/9/2019 5:30:02 PM	47301
Cobalt	ND	0.015	0.030		mg/L	5	9/9/2019 5:30:02 PM	47301
Copper	ND	0.020	0.030		mg/L	5	9/9/2019 5:30:02 PM	47301
Iron	7.9	0.44	1.0	*	mg/L	50	9/9/2019 5:31:58 PM	47301
Manganese	1.7	0.0014	0.010	*	mg/L	5	9/9/2019 5:30:02 PM	47301
Molybdenum	ND	0.034	0.040		mg/L	5	9/9/2019 5:30:02 PM	47301
Nickel	0.18	0.020	0.050	*	mg/L	5	9/9/2019 5:30:02 PM	47301
Silver	ND	0.0071	0.025		mg/L	5	9/9/2019 5:30:02 PM	47301
Zinc	ND	0.029	0.050		mg/L	5	9/9/2019 5:30:02 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:42:15 PM	A62791
Arsenic	0.0076	0.00010	0.0010		mg/L	1	9/9/2019 5:42:15 PM	A62791
Lead	0.00041	0.000055	0.00050	J	mg/L	1	9/9/2019 5:42:15 PM	A62791
Selenium	0.0012	0.00017	0.0010		mg/L	1	9/9/2019 5:42:15 PM	A62791
Thallium	ND	0.000048	0.00050		mg/L	1	9/9/2019 5:42:15 PM	A62791
Uranium	0.0051	0.000075	0.00050		mg/L	1	9/9/2019 5:42:15 PM	A62791
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/5/2019 6:46:14 PM	47301
Arsenic	0.0089	0.0016	0.0050		mg/L	5	9/5/2019 6:46:14 PM	47301
Lead	0.0065	0.00027	0.0025		mg/L	5	9/5/2019 6:46:14 PM	47301
Selenium	ND	0.0024	0.0050		mg/L	5	9/5/2019 6:46:14 PM	47301
Thallium	ND	0.00026	0.0025		mg/L	5	9/5/2019 6:46:14 PM	47301
Uranium	0.0051	0.00042	0.0025		mg/L	5	9/5/2019 6:46:14 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	9/12/2019 4:47:28 PM	47429
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Aniline	ND	3.6	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 5:22:50 PM	47026

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 5:22:50 PM	47026
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 5:22:50 PM	47026
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 5:22:50 PM	47026
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 5:22:50 PM	47026
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 5:22:50 PM	47026
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 5:22:50 PM	47026
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 5:22:50 PM	47026
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 5:22:50 PM	47026
2,4-Dimethylphenol	23	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 5:22:50 PM	47026
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 5:22:50 PM	47026
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 5:22:50 PM	47026

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Qualifiers:

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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
1-Methylnaphthalene	73	3.1	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 5:22:50 PM	47026
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 5:22:50 PM	47026
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 5:22:50 PM	47026
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Naphthalene	5.6	4.1	10	J	µg/L	1	8/29/2019 5:22:50 PM	47026
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 5:22:50 PM	47026
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 5:22:50 PM	47026
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 5:22:50 PM	47026
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Phenol	ND	8.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 5:22:50 PM	47026
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 5:22:50 PM	47026
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 5:22:50 PM	47026
Surr: 2-Fluorophenol	57.1	0	15-101		%Rec	1	8/29/2019 5:22:50 PM	47026
Surr: Phenol-d5	46.2	0	15-84.6		%Rec	1	8/29/2019 5:22:50 PM	47026
Surr: 2,4,6-Tribromophenol	66.8	0	27.8-112		%Rec	1	8/29/2019 5:22:50 PM	47026
Surr: Nitrobenzene-d5	85.0	0	33-113		%Rec	1	8/29/2019 5:22:50 PM	47026
Surr: 2-Fluorobiphenyl	78.5	0	26.6-107		%Rec	1	8/29/2019 5:22:50 PM	47026
Surr: 4-Terphenyl-d14	74.1	0	18.7-148		%Rec	1	8/29/2019 5:22:50 PM	47026
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	210	1.7	10		µg/L	10	8/27/2019 3:11:00 PM	R62438
Toluene	2.1	0.35	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Ethylbenzene	32	0.13	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Methyl tert-butyl ether (MTBE)	290	4.6	10		µg/L	10	8/27/2019 3:11:00 PM	R62438
1,2,4-Trimethylbenzene	19	0.21	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Naphthalene	4.3	0.28	2.0		µg/L	1	8/27/2019 3:35:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	83	0.31	4.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Acetone	29	1.2	10		µg/L	1	8/27/2019 3:35:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
2-Butanone	6.5	2.1	10	J	µg/L	1	8/27/2019 3:35:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 3:35:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,1-Dichloroethane	1.5	0.14	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 3:35:00 PM	R62438
Isopropylbenzene	3.5	0.19	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
4-Isopropyltoluene	1.2	0.22	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 3:35:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
n-Butylbenzene	1.5	0.23	3.0	J	µg/L	1	8/27/2019 3:35:00 PM	R62438
n-Propylbenzene	4.4	0.21	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	0.88	0.25	1.0	J	µg/L	1	8/27/2019 3:35:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 3:35:00 PM	R62438
Xylenes, Total	12	0.45	1.5		µg/L	1	8/27/2019 3:35:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	99.1	0	70-130		%Rec	1	8/27/2019 3:35:00 PM	R62438
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	8/27/2019 3:35:00 PM	R62438
Surr: Dibromofluoromethane	95.6	0	70-130		%Rec	1	8/27/2019 3:35:00 PM	R62438
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	8/27/2019 3:35:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	12	0.35	1.0		mg/L	1	8/28/2019 1:47:14 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 1:47:14 AM	47050
Surr: DNOP	119	0	70-130		%Rec	1	8/28/2019 1:47:14 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.95	0.021	0.050		mg/L	1	8/26/2019 10:46:21 PM	B62420
Surr: BFB	279	0	65.8-143	S	%Rec	1	8/26/2019 10:46:21 PM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.073	0.50		mg/L	5	8/23/2019 8:03:27 PM	R62406
Chloride	1600	50	50		mg/L	100	9/7/2019 12:15:28 PM	R62751
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/23/2019 8:03:27 PM	R62406
Bromide	3.7	0.089	0.50		mg/L	5	8/23/2019 8:03:27 PM	R62406
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 8:03:27 PM	R62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 8:03:27 PM	R62406
Sulfate	4.8	0.33	2.5		mg/L	5	8/23/2019 8:03:27 PM	R62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	ND	0.012	0.10		mg/L	5	9/14/2019 1:14:46 PM	B62943
Barium	1.0	0.0032	0.010		mg/L	5	9/14/2019 1:14:46 PM	B62943
Beryllium	ND	0.0014	0.010		mg/L	5	9/14/2019 1:14:46 PM	B62943
Boron	1.6	0.023	0.20		mg/L	5	9/14/2019 1:14:46 PM	B62943
Cadmium	ND	0.0028	0.010		mg/L	5	9/14/2019 1:14:46 PM	B62943
Calcium	140	0.31	5.0		mg/L	5	9/14/2019 1:14:46 PM	B62943
Chromium	ND	0.0077	0.030		mg/L	5	9/14/2019 1:14:46 PM	B62943
Cobalt	ND	0.015	0.030		mg/L	5	9/14/2019 1:14:46 PM	B62943
Copper	ND	0.0065	0.030		mg/L	5	9/14/2019 1:14:46 PM	B62943
Iron	5.8	0.44	1.0	*	mg/L	50	9/14/2019 1:16:42 PM	B62943
Magnesium	28	0.25	5.0		mg/L	5	9/14/2019 1:14:46 PM	B62943
Manganese	1.6	0.0014	0.010	*	mg/L	5	9/14/2019 1:14:46 PM	B62943
Molybdenum	ND	0.034	0.040		mg/L	5	9/14/2019 1:14:46 PM	B62943
Nickel	0.18	0.020	0.050	*	mg/L	5	9/14/2019 1:14:46 PM	B62943
Potassium	2.9	0.81	5.0	J	mg/L	5	9/14/2019 1:14:46 PM	B62943
Silver	ND	0.0047	0.025		mg/L	5	9/14/2019 1:14:46 PM	B62943
Sodium	1300	21	50		mg/L	50	9/14/2019 1:16:42 PM	B62943
Zinc	0.024	0.011	0.050	J	mg/L	5	9/14/2019 1:14:46 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.51	0.012	0.10	*	mg/L	5	9/12/2019 10:06:26 AM	47376
Barium	0.99	0.0032	0.010		mg/L	5	9/9/2019 5:34:08 PM	47301
Beryllium	ND	0.0014	0.010		mg/L	5	9/9/2019 5:34:08 PM	47301

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Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.5	0.023	0.20		mg/L	5	9/9/2019 5:34:08 PM	47301
Cadmium	ND	0.0037	0.010		mg/L	5	9/9/2019 5:34:08 PM	47301
Chromium	ND	0.0077	0.030		mg/L	5	9/9/2019 5:34:08 PM	47301
Cobalt	ND	0.015	0.030		mg/L	5	9/9/2019 5:34:08 PM	47301
Copper	ND	0.020	0.030		mg/L	5	9/9/2019 5:34:08 PM	47301
Iron	7.3	0.44	1.0	*	mg/L	50	9/9/2019 5:44:04 PM	47301
Manganese	1.6	0.0014	0.010	*	mg/L	5	9/9/2019 5:34:08 PM	47301
Molybdenum	ND	0.034	0.040		mg/L	5	9/9/2019 5:34:08 PM	47301
Nickel	0.19	0.020	0.050	*	mg/L	5	9/9/2019 5:34:08 PM	47301
Silver	ND	0.0071	0.025		mg/L	5	9/9/2019 5:34:08 PM	47301
Zinc	ND	0.029	0.050		mg/L	5	9/9/2019 5:34:08 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	0.00048	0.00039	0.0010	J	mg/L	1	9/19/2019 7:31:21 PM	B63058
Arsenic	0.0071	0.00010	0.0010		mg/L	1	9/4/2019 6:18:50 PM	C62654
Lead	0.00048	0.000055	0.00050	J	mg/L	1	9/19/2019 7:31:21 PM	B63058
Selenium	0.00091	0.00017	0.0010	J	mg/L	1	9/4/2019 6:18:50 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/19/2019 7:31:21 PM	B63058
Uranium	0.0062	0.000075	0.00050		mg/L	1	9/19/2019 7:31:21 PM	B63058
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/5/2019 6:48:24 PM	47301
Arsenic	0.0078	0.0016	0.0050		mg/L	5	9/5/2019 6:48:24 PM	47301
Lead	0.0027	0.00027	0.0025		mg/L	5	9/5/2019 6:48:24 PM	47301
Selenium	ND	0.0024	0.0050		mg/L	5	9/5/2019 6:48:24 PM	47301
Thallium	ND	0.00026	0.0025		mg/L	5	9/5/2019 6:48:24 PM	47301
Uranium	0.0047	0.00042	0.0025		mg/L	5	9/5/2019 6:48:24 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	9/12/2019 4:49:40 PM	47429
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	3.7	3.0	10	J	µg/L	1	8/29/2019 5:52:54 PM	47026
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Aniline	ND	3.6	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 5:52:54 PM	47026

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 5:52:54 PM	47026
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 5:52:54 PM	47026
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 5:52:54 PM	47026
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 5:52:54 PM	47026
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 5:52:54 PM	47026
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 5:52:54 PM	47026
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 5:52:54 PM	47026
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 5:52:54 PM	47026
2,4-Dimethylphenol	24	3.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 5:52:54 PM	47026
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 5:52:54 PM	47026
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 5:52:54 PM	47026

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
1-Methylnaphthalene	89	3.1	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 5:52:54 PM	47026
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 5:52:54 PM	47026
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 5:52:54 PM	47026
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Naphthalene	7.0	4.1	10	J	µg/L	1	8/29/2019 5:52:54 PM	47026
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 5:52:54 PM	47026
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 5:52:54 PM	47026
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 5:52:54 PM	47026
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Phenol	ND	8.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 5:52:54 PM	47026
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 5:52:54 PM	47026
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 5:52:54 PM	47026
Surr: 2-Fluorophenol	58.0	0	15-101		%Rec	1	8/29/2019 5:52:54 PM	47026
Surr: Phenol-d5	47.6	0	15-84.6		%Rec	1	8/29/2019 5:52:54 PM	47026
Surr: 2,4,6-Tribromophenol	69.5	0	27.8-112		%Rec	1	8/29/2019 5:52:54 PM	47026
Surr: Nitrobenzene-d5	91.0	0	33-113		%Rec	1	8/29/2019 5:52:54 PM	47026
Surr: 2-Fluorobiphenyl	83.9	0	26.6-107		%Rec	1	8/29/2019 5:52:54 PM	47026
Surr: 4-Terphenyl-d14	70.1	0	18.7-148		%Rec	1	8/29/2019 5:52:54 PM	47026
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	210	1.7	10		µg/L	10	8/27/2019 4:00:00 PM	R62438
Toluene	2.0	0.35	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Ethylbenzene	32	0.13	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Methyl tert-butyl ether (MTBE)	290	4.6	10		µg/L	10	8/27/2019 4:00:00 PM	R62438
1,2,4-Trimethylbenzene	19	0.21	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Naphthalene	4.2	0.28	2.0		µg/L	1	8/27/2019 4:25:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	84	0.31	4.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Acetone	33	1.2	10		µg/L	1	8/27/2019 4:25:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
2-Butanone	6.5	2.1	10	J	µg/L	1	8/27/2019 4:25:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 4:25:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,1-Dichloroethane	1.4	0.14	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 4:25:00 PM	R62438
Isopropylbenzene	3.5	0.19	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
4-Isopropyltoluene	1.2	0.22	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 4:25:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
n-Butylbenzene	1.6	0.23	3.0	J	µg/L	1	8/27/2019 4:25:00 PM	R62438
n-Propylbenzene	4.4	0.21	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438

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Client Sample ID: Duplicate
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 11:30:00 AM
Lab ID: 1908D65-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	0.88	0.25	1.0	J	µg/L	1	8/27/2019 4:25:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 4:25:00 PM	R62438
Xylenes, Total	12	0.45	1.5		µg/L	1	8/27/2019 4:25:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	93.4	0	70-130		%Rec	1	8/27/2019 4:25:00 PM	R62438
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	8/27/2019 4:25:00 PM	R62438
Surr: Dibromofluoromethane	92.8	0	70-130		%Rec	1	8/27/2019 4:25:00 PM	R62438
Surr: Toluene-d8	98.1	0	70-130		%Rec	1	8/27/2019 4:25:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: West LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:15:00 AM
Lab ID: 1908D65-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	6.7	0.35	1.0		mg/L	1	8/28/2019 2:09:32 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 2:09:32 AM	47050
Surr: DNOP	112	0	70-130		%Rec	1	8/28/2019 2:09:32 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.32	0.021	0.050		mg/L	1	8/26/2019 11:09:27 PM	B62420
Surr: BFB	191	0	65.8-143	S	%Rec	1	8/26/2019 11:09:27 PM	B62420
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.15	0.0025	0.020		mg/L	1	9/14/2019 1:18:52 PM	B62943
Barium	0.066	0.00065	0.0020		mg/L	1	9/14/2019 1:18:52 PM	B62943
Beryllium	0.00064	0.00028	0.0020	J	mg/L	1	9/14/2019 1:18:52 PM	B62943
Boron	0.50	0.0045	0.040		mg/L	1	9/14/2019 1:18:52 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 1:18:52 PM	B62943
Chromium	0.11	0.0015	0.0060	*	mg/L	1	9/14/2019 1:18:52 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 1:18:52 PM	B62943
Copper	ND	0.0013	0.0060		mg/L	1	9/14/2019 1:18:52 PM	B62943
Iron	34	0.44	1.0	*	mg/L	50	9/14/2019 1:22:56 PM	B62943
Manganese	28	0.014	0.10	*	mg/L	50	9/14/2019 1:22:56 PM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 1:18:52 PM	B62943
Nickel	0.10	0.0040	0.010		mg/L	1	9/14/2019 1:18:52 PM	B62943
Silver	0.0054	0.00094	0.0050		mg/L	1	9/14/2019 1:18:52 PM	B62943
Zinc	0.0082	0.0023	0.010	J	mg/L	1	9/14/2019 1:18:52 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.98	0.012	0.10	*	mg/L	5	9/12/2019 10:08:21 AM	47376
Barium	0.073	0.00065	0.0020		mg/L	1	9/9/2019 5:46:16 PM	47301
Beryllium	0.00063	0.00028	0.0020	J	mg/L	1	9/9/2019 5:46:16 PM	47301
Boron	0.51	0.0045	0.040		mg/L	1	9/9/2019 5:46:16 PM	47301
Cadmium	ND	0.00074	0.0020		mg/L	1	9/9/2019 5:46:16 PM	47301
Chromium	0.24	0.0015	0.0060	*	mg/L	1	9/9/2019 5:46:16 PM	47301
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 5:46:16 PM	47301
Copper	ND	0.0041	0.0060		mg/L	1	9/9/2019 5:46:16 PM	47301
Iron	38	0.44	1.0	*	mg/L	50	9/12/2019 10:16:39 AM	47376
Manganese	28	0.014	0.10	*	mg/L	50	9/12/2019 10:16:39 AM	47376
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/9/2019 5:46:16 PM	47301
Nickel	0.11	0.0040	0.010	*	mg/L	1	9/9/2019 5:46:16 PM	47301
Silver	0.0058	0.0014	0.0050		mg/L	1	9/9/2019 5:46:16 PM	47301
Zinc	0.029	0.0058	0.010		mg/L	1	9/9/2019 5:46:16 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: West LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:15:00 AM
Lab ID: 1908D65-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/9/2019 5:55:47 PM	A62791
Arsenic	0.00061	0.00050	0.0050	J	mg/L	5	9/9/2019 5:55:47 PM	A62791
Lead	ND	0.00027	0.0025		mg/L	5	9/9/2019 5:55:47 PM	A62791
Selenium	ND	0.00086	0.0050		mg/L	5	9/9/2019 5:55:47 PM	A62791
Thallium	ND	0.00024	0.0025		mg/L	5	9/9/2019 5:55:47 PM	A62791
Uranium	0.00062	0.00037	0.0025	J	mg/L	5	9/9/2019 5:55:47 PM	A62791
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 6:50:35 PM	47301
Arsenic	0.00046	0.00031	0.0010	J	mg/L	1	9/5/2019 6:50:35 PM	47301
Lead	0.00047	0.000055	0.00050	J	mg/L	1	9/5/2019 6:50:35 PM	47301
Selenium	ND	0.00048	0.0010		mg/L	1	9/5/2019 6:50:35 PM	47301
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 6:50:35 PM	47301
Uranium	0.00062	0.000085	0.00050		mg/L	1	9/5/2019 6:50:35 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00018	0.000038	0.00020	J	mg/L	1	9/12/2019 4:51:52 PM	47429
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	0.98	0.17	1.0	J	µg/L	1	8/27/2019 4:50:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Ethylbenzene	0.23	0.13	1.0	J	µg/L	1	8/27/2019 4:50:00 PM	R62438
Methyl tert-butyl ether (MTBE)	3.9	0.46	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2,4-Trimethylbenzene	0.34	0.21	1.0	J	µg/L	1	8/27/2019 4:50:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1-Methylnaphthalene	4.5	0.31	4.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Acetone	6.5	1.2	10	J	µg/L	1	8/27/2019 4:50:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 4:50:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 4:50:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: West LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:15:00 AM
Lab ID: 1908D65-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 4:50:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 4:50:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
sec-Butylbenzene	0.75	0.25	1.0	J	µg/L	1	8/27/2019 4:50:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Trichloroethene (TCE)	0.46	0.17	1.0	J	µg/L	1	8/27/2019 4:50:00 PM	R62438

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: West LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:15:00 AM
Lab ID: 1908D65-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 4:50:00 PM	R62438
Xylenes, Total	1.1	0.45	1.5	J	µg/L	1	8/27/2019 4:50:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	97.0	0	70-130		%Rec	1	8/27/2019 4:50:00 PM	R62438
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	8/27/2019 4:50:00 PM	R62438
Surr: Dibromofluoromethane	95.0	0	70-130		%Rec	1	8/27/2019 4:50:00 PM	R62438
Surr: Toluene-d8	95.6	0	70-130		%Rec	1	8/27/2019 4:50:00 PM	R62438

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: East LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:20:00 AM
Lab ID: 1908D65-009
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	2.8	0.35	1.0		mg/L	1	8/28/2019 2:31:57 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 2:31:57 AM	47050
Surr: DNOP	116	0	70-130		%Rec	1	8/28/2019 2:31:57 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.2	0.11	0.25		mg/L	5	8/26/2019 11:32:31 PM	B62420
Surr: BFB	128	0	65.8-143		%Rec	5	8/26/2019 11:32:31 PM	B62420
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	0.32	0.0025	0.020	*	mg/L	1	9/14/2019 1:25:04 PM	B62943
Barium	0.061	0.00065	0.0020		mg/L	1	9/14/2019 1:25:04 PM	B62943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 1:25:04 PM	B62943
Boron	0.025	0.0045	0.040	J	mg/L	1	9/14/2019 1:25:04 PM	B62943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 1:25:04 PM	B62943
Chromium	0.094	0.0015	0.0060		mg/L	1	9/14/2019 1:25:04 PM	B62943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 1:25:04 PM	B62943
Copper	ND	0.0013	0.0060		mg/L	1	9/14/2019 1:25:04 PM	B62943
Iron	4.8	0.087	0.20	*	mg/L	10	9/14/2019 1:27:04 PM	B62943
Manganese	0.95	0.00029	0.0020	*	mg/L	1	9/14/2019 1:25:04 PM	B62943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 1:25:04 PM	B62943
Nickel	0.0064	0.0040	0.010	J	mg/L	1	9/14/2019 1:25:04 PM	B62943
Silver	ND	0.00094	0.0050		mg/L	1	9/14/2019 1:25:04 PM	B62943
Zinc	0.0067	0.0023	0.010	J	mg/L	1	9/14/2019 1:25:04 PM	B62943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.38	0.0025	0.020	*	mg/L	1	9/12/2019 10:18:40 AM	47376
Barium	0.064	0.00065	0.0020		mg/L	1	9/9/2019 5:52:12 PM	47301
Beryllium	ND	0.00028	0.0020		mg/L	1	9/9/2019 5:52:12 PM	47301
Boron	0.022	0.0045	0.040	J	mg/L	1	9/9/2019 5:52:12 PM	47301
Cadmium	ND	0.00074	0.0020		mg/L	1	9/9/2019 5:52:12 PM	47301
Chromium	0.17	0.0015	0.0060	*	mg/L	1	9/9/2019 5:52:12 PM	47301
Cobalt	ND	0.0031	0.0060		mg/L	1	9/9/2019 5:52:12 PM	47301
Copper	ND	0.0041	0.0060		mg/L	1	9/9/2019 5:52:12 PM	47301
Iron	5.1	0.087	0.20	*	mg/L	10	9/14/2019 9:06:26 AM	47376
Manganese	0.87	0.00029	0.0020	*	mg/L	1	9/9/2019 5:52:12 PM	47301
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/9/2019 5:52:12 PM	47301
Nickel	0.017	0.0040	0.010		mg/L	1	9/9/2019 5:52:12 PM	47301
Silver	ND	0.0014	0.0050		mg/L	1	9/9/2019 5:52:12 PM	47301
Zinc	0.0073	0.0058	0.010	J	mg/L	1	9/9/2019 5:52:12 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: East LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:20:00 AM
Lab ID: 1908D65-009
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 5:58:29 PM	A62791
Arsenic	0.00027	0.00010	0.0010	J	mg/L	1	9/4/2019 6:24:15 PM	C62654
Lead	ND	0.000055	0.00050		mg/L	1	9/4/2019 6:24:15 PM	C62654
Selenium	ND	0.00017	0.0010		mg/L	1	9/4/2019 6:24:15 PM	C62654
Thallium	ND	0.000048	0.00050		mg/L	1	9/4/2019 6:24:15 PM	C62654
Uranium	0.00011	0.000075	0.00050	J	mg/L	1	9/4/2019 6:24:15 PM	C62654
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 6:52:45 PM	47301
Arsenic	0.00046	0.00031	0.0010	J	mg/L	1	9/5/2019 6:52:45 PM	47301
Lead	0.00015	0.000055	0.00050	J	mg/L	1	9/5/2019 6:52:45 PM	47301
Selenium	ND	0.00048	0.0010		mg/L	1	9/5/2019 6:52:45 PM	47301
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 6:52:45 PM	47301
Uranium	0.00012	0.000085	0.00050	J	mg/L	1	9/5/2019 6:52:45 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00013	0.000038	0.00020	J	mg/L	1	9/12/2019 4:54:05 PM	47429
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	600	3.3	20		µg/L	20	8/27/2019 5:14:00 PM	R62438
Toluene	150	0.70	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Ethylbenzene	57	0.26	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Methyl tert-butyl ether (MTBE)	2.4	0.91	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2,4-Trimethylbenzene	37	0.43	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,3,5-Trimethylbenzene	11	0.38	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.39	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.33	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Naphthalene	30	0.55	4.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1-Methylnaphthalene	16	0.63	8.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
2-Methylnaphthalene	14	0.69	8.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Acetone	33	2.4	20		µg/L	2	8/27/2019 5:39:00 PM	R62438
Bromobenzene	ND	0.49	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Bromodichloromethane	ND	0.27	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Bromoform	ND	0.58	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Bromomethane	ND	0.55	6.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
2-Butanone	11	4.2	20	J	µg/L	2	8/27/2019 5:39:00 PM	R62438
Carbon disulfide	4.2	0.91	20	J	µg/L	2	8/27/2019 5:39:00 PM	R62438
Carbon Tetrachloride	ND	0.28	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Chlorobenzene	ND	0.39	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Chloroethane	ND	0.36	4.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Chloroform	ND	0.24	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: East LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:20:00 AM
Lab ID: 1908D65-009
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Chloromethane	ND	0.64	6.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
2-Chlorotoluene	ND	0.49	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
4-Chlorotoluene	ND	0.47	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
cis-1,2-DCE	ND	0.38	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.28	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.65	4.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Dibromochloromethane	ND	0.48	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Dibromomethane	ND	0.42	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2-Dichlorobenzene	ND	0.59	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,3-Dichlorobenzene	ND	0.50	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,4-Dichlorobenzene	ND	0.59	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,1-Dichloroethane	ND	0.28	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,1-Dichloroethene	ND	0.41	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2-Dichloropropane	ND	0.42	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,3-Dichloropropane	ND	0.40	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Hexachlorobutadiene	ND	0.62	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
2-Hexanone	ND	3.1	20		µg/L	2	8/27/2019 5:39:00 PM	R62438
Isopropylbenzene	7.4	0.38	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
4-Isopropyltoluene	2.6	0.43	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	8/27/2019 5:39:00 PM	R62438
Methylene Chloride	0.88	0.31	6.0	J	µg/L	2	8/27/2019 5:39:00 PM	R62438
n-Butylbenzene	3.4	0.46	6.0	J	µg/L	2	8/27/2019 5:39:00 PM	R62438
n-Propylbenzene	8.5	0.43	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
sec-Butylbenzene	2.6	0.50	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Styrene	ND	0.38	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
tert-Butylbenzene	0.47	0.41	2.0	J	µg/L	2	8/27/2019 5:39:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.41	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	1.1	4.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.33	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.60	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.39	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,1,1-Trichloroethane	ND	0.35	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,1,2-Trichloroethane	ND	0.43	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Trichloroethene (TCE)	ND	0.33	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: East LDU
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/22/2019 10:20:00 AM
Lab ID: 1908D65-009
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Trichlorofluoromethane	ND	0.38	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
1,2,3-Trichloropropane	ND	0.59	4.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Vinyl chloride	ND	0.36	2.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Xylenes, Total	150	0.91	3.0		µg/L	2	8/27/2019 5:39:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	95.7	0	70-130		%Rec	2	8/27/2019 5:39:00 PM	R62438
Surr: 4-Bromofluorobenzene	99.5	0	70-130		%Rec	2	8/27/2019 5:39:00 PM	R62438
Surr: Dibromofluoromethane	95.0	0	70-130		%Rec	2	8/27/2019 5:39:00 PM	R62438
Surr: Toluene-d8	98.0	0	70-130		%Rec	2	8/27/2019 5:39:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/21/2019 3:54:00 PM
Lab ID: 1908D65-010
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/28/2019 2:54:05 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 2:54:05 AM	47050
Surr: DNOP	111	0	70-130		%Rec	1	8/28/2019 2:54:05 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/27/2019 12:41:15 AM	B62420
Surr: BFB	103	0	65.8-143		%Rec	1	8/27/2019 12:41:15 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Fluoride	0.21	0.073	0.50	J	mg/L	5	8/23/2019 9:57:03 AM	R62407
Chloride	1800	100	100		mg/L	200	9/7/2019 12:40:10 PM	R62751
Nitrogen, Nitrite (As N)	1.8	0.027	0.50		mg/L	5	8/23/2019 9:57:03 AM	R62407
Bromide	3.9	0.089	0.50		mg/L	5	9/7/2019 12:27:49 PM	R62751
Nitrogen, Nitrate (As N)	17	0.025	0.50	*	mg/L	5	8/23/2019 9:57:03 AM	R62407
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 9:57:03 AM	R62407
Sulfate	730	1.3	10		mg/L	20	8/23/2019 10:09:28 AM	R62407
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **bcv**	
Aluminum	1.6	0.012	0.10	*	mg/L	5	9/14/2019 1:31:21 PM	A92943
Barium	0.056	0.00065	0.0020		mg/L	1	9/14/2019 1:29:12 PM	A92943
Beryllium	ND	0.00028	0.0020		mg/L	1	9/14/2019 1:29:12 PM	A92943
Boron	2.5	0.023	0.20		mg/L	5	9/14/2019 1:31:21 PM	A92943
Cadmium	ND	0.00055	0.0020		mg/L	1	9/14/2019 1:29:12 PM	A92943
Calcium	100	0.062	1.0		mg/L	1	9/14/2019 1:29:12 PM	A92943
Chromium	0.0031	0.0015	0.0060	J	mg/L	1	9/14/2019 1:29:12 PM	A92943
Cobalt	ND	0.0031	0.0060		mg/L	1	9/14/2019 1:29:12 PM	A92943
Copper	0.0039	0.0013	0.0060	J	mg/L	1	9/14/2019 1:29:12 PM	A92943
Iron	0.38	0.0087	0.020	*	mg/L	1	9/14/2019 1:29:12 PM	A92943
Magnesium	16	0.050	1.0		mg/L	1	9/14/2019 1:29:12 PM	A92943
Manganese	0.062	0.00029	0.0020	*	mg/L	1	9/14/2019 1:29:12 PM	A92943
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/14/2019 1:29:12 PM	A92943
Nickel	0.012	0.0040	0.010		mg/L	1	9/14/2019 1:29:12 PM	A92943
Potassium	3.5	0.16	1.0		mg/L	1	9/14/2019 1:29:12 PM	A92943
Silver	0.0017	0.00094	0.0050	J	mg/L	1	9/14/2019 1:29:12 PM	A92943
Sodium	1600	42	100		mg/L	100	9/14/2019 1:33:26 PM	A92943
Zinc	0.0066	0.0023	0.010	J	mg/L	1	9/14/2019 1:29:12 PM	A92943
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	39	0.25	2.0	*	mg/L	100	9/12/2019 10:20:44 AM	47377
Barium	0.49	0.00065	0.0020		mg/L	1	9/9/2019 5:56:14 PM	47301
Beryllium	0.0020	0.00028	0.0020		mg/L	1	9/9/2019 5:56:14 PM	47301

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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/21/2019 3:54:00 PM
Lab ID: 1908D65-010
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	2.5	0.023	0.20		mg/L	5	9/9/2019 5:58:19 PM	47301
Cadmium	ND	0.00074	0.0020		mg/L	1	9/9/2019 5:56:14 PM	47301
Chromium	0.038	0.0015	0.0060		mg/L	1	9/9/2019 5:56:14 PM	47301
Cobalt	0.0071	0.0031	0.0060		mg/L	1	9/9/2019 5:56:14 PM	47301
Copper	0.0088	0.0041	0.0060		mg/L	1	9/9/2019 5:56:14 PM	47301
Iron	15	0.87	2.0	*	mg/L	100	9/9/2019 6:00:10 PM	47301
Manganese	0.57	0.00029	0.0020	*	mg/L	1	9/9/2019 5:56:14 PM	47301
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/9/2019 5:56:14 PM	47301
Nickel	0.032	0.0040	0.010		mg/L	1	9/9/2019 5:56:14 PM	47301
Silver	ND	0.0014	0.0050		mg/L	1	9/9/2019 5:56:14 PM	47301
Zinc	0.041	0.0058	0.010		mg/L	1	9/9/2019 5:56:14 PM	47301
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/9/2019 6:01:10 PM	A62791
Arsenic	0.0018	0.00050	0.0050	J	mg/L	5	9/9/2019 6:01:10 PM	A62791
Lead	0.00063	0.00027	0.0025	J	mg/L	5	9/9/2019 6:01:10 PM	A62791
Selenium	0.015	0.00086	0.0050		mg/L	5	9/9/2019 6:01:10 PM	A62791
Thallium	ND	0.00024	0.0025		mg/L	5	9/9/2019 6:01:10 PM	A62791
Uranium	0.051	0.00037	0.0025	*	mg/L	5	9/9/2019 6:01:10 PM	A62791
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/5/2019 6:54:56 PM	47301
Arsenic	0.0048	0.0016	0.0050	J	mg/L	5	9/5/2019 6:54:56 PM	47301
Lead	0.012	0.00027	0.0025		mg/L	5	9/5/2019 6:54:56 PM	47301
Selenium	0.022	0.0024	0.0050		mg/L	5	9/5/2019 6:54:56 PM	47301
Thallium	ND	0.00026	0.0025		mg/L	5	9/5/2019 6:54:56 PM	47301
Uranium	0.054	0.00042	0.0025	*	mg/L	5	9/5/2019 6:54:56 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	9/12/2019 4:56:18 PM	47429
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Aniline	ND	3.6	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 6:23:16 PM	47026

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B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/21/2019 3:54:00 PM
Lab ID: 1908D65-010
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 6:23:16 PM	47026
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 6:23:16 PM	47026
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 6:23:16 PM	47026
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 6:23:16 PM	47026
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 6:23:16 PM	47026
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 6:23:16 PM	47026
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 6:23:16 PM	47026
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 6:23:16 PM	47026
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 6:23:16 PM	47026
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 6:23:16 PM	47026
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 6:23:16 PM	47026

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/21/2019 3:54:00 PM
Lab ID: 1908D65-010
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 6:23:16 PM	47026
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 6:23:16 PM	47026
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 6:23:16 PM	47026
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Naphthalene	ND	4.1	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 6:23:16 PM	47026
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 6:23:16 PM	47026
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 6:23:16 PM	47026
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Phenol	ND	8.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 6:23:16 PM	47026
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 6:23:16 PM	47026
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 6:23:16 PM	47026
Surr: 2-Fluorophenol	59.6	0	15-101		%Rec	1	8/29/2019 6:23:16 PM	47026
Surr: Phenol-d5	53.1	0	15-84.6		%Rec	1	8/29/2019 6:23:16 PM	47026
Surr: 2,4,6-Tribromophenol	66.3	0	27.8-112		%Rec	1	8/29/2019 6:23:16 PM	47026
Surr: Nitrobenzene-d5	100	0	33-113		%Rec	1	8/29/2019 6:23:16 PM	47026
Surr: 2-Fluorobiphenyl	80.2	0	26.6-107		%Rec	1	8/29/2019 6:23:16 PM	47026
Surr: 4-Terphenyl-d14	69.6	0	18.7-148		%Rec	1	8/29/2019 6:23:16 PM	47026
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	0.29	0.17	1.0	J	µg/L	1	8/27/2019 6:04:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Methyl tert-butyl ether (MTBE)	0.74	0.46	1.0	J	µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 6:04:00 PM	R62438

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Qualifiers:

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B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/21/2019 3:54:00 PM
Lab ID: 1908D65-010
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	0.93	0.31	4.0	J	µg/L	1	8/27/2019 6:04:00 PM	R62438
2-Methylnaphthalene	1.1	0.35	4.0	J	µg/L	1	8/27/2019 6:04:00 PM	R62438
Acetone	ND	1.2	10		µg/L	1	8/27/2019 6:04:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 6:04:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 6:04:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 6:04:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 6:04:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-60
Project: 2019 Annual 3rd QTR GW Sampling
Collection Date: 8/21/2019 3:54:00 PM
Lab ID: 1908D65-010
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 6:04:00 PM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 6:04:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	98.6	0	70-130		%Rec	1	8/27/2019 6:04:00 PM	R62438
Surr: 4-Bromofluorobenzene	98.0	0	70-130		%Rec	1	8/27/2019 6:04:00 PM	R62438
Surr: Dibromofluoromethane	93.7	0	70-130		%Rec	1	8/27/2019 6:04:00 PM	R62438
Surr: Toluene-d8	96.1	0	70-130		%Rec	1	8/27/2019 6:04:00 PM	R62438

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-47301** SampType: **MBLK** TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW** Batch ID: **47301** RunNo: **62735**
Prep Date: **9/5/2019** Analysis Date: **9/6/2019** SeqNo: **2136547** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								

Sample ID: **LLLCS-47301** SampType: **LCSLL** TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC** Batch ID: **47301** RunNo: **62735**
Prep Date: **9/5/2019** Analysis Date: **9/6/2019** SeqNo: **2136549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	97.1	50	150			J
Beryllium	0.0020	0.0020	0.002000	0	101	50	150			
Boron	0.041	0.040	0.04000	0	103	50	150			
Cadmium	0.0019	0.0020	0.002000	0	92.6	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.3	50	150			J
Cobalt	0.0066	0.0060	0.006000	0	110	50	150			
Copper	0.0064	0.0060	0.006000	0	107	50	150			
Iron	0.020	0.020	0.02000	0	98.2	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Molybdenum	0.0088	0.0080	0.008000	0	110	50	150			
Nickel	0.0065	0.010	0.005000	0	131	50	150			J
Silver	0.0052	0.0050	0.005000	0	104	50	150			

Sample ID: **LCS-47301** SampType: **LCS** TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW** Batch ID: **47301** RunNo: **62735**
Prep Date: **9/5/2019** Analysis Date: **9/6/2019** SeqNo: **2136551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.5	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.0	85	115			
Boron	0.49	0.040	0.5000	0	97.8	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-47301**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47301**	RunNo: **62735**
Prep Date: **9/5/2019**	Analysis Date: **9/6/2019**	SeqNo: **2136551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.48	0.0060	0.5000	0	96.1	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.9	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Molybdenum	0.48	0.0080	0.5000	0	95.4	85	115			
Nickel	0.47	0.010	0.5000	0	94.2	85	115			
Silver	0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID: **MB-47301**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **47301**	RunNo: **62788**
Prep Date: **9/5/2019**	Analysis Date: **9/9/2019**	SeqNo: **2139054** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID: **LLLCS-47301**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47301**	RunNo: **62788**
Prep Date: **9/5/2019**	Analysis Date: **9/9/2019**	SeqNo: **2139056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.015	0.010	0.01000	0	150	50	150			

Sample ID: **LCS-47301**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47301**	RunNo: **62788**
Prep Date: **9/5/2019**	Analysis Date: **9/9/2019**	SeqNo: **2139058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0	98.1	85	115			

Sample ID: **1908D65-004FMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **KA-3**	Batch ID: **47301**	RunNo: **62788**
Prep Date: **9/5/2019**	Analysis Date: **9/9/2019**	SeqNo: **2139150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.51	0.0020	0.5000	0	103	70	130			
Cadmium	0.51	0.0020	0.5000	0	102	70	130			
Chromium	0.49	0.0060	0.5000	0	97.0	70	130			
Cobalt	0.48	0.0060	0.5000	0	96.2	70	130			
Copper	0.51	0.0060	0.5000	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908D65-004FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **KA-3** Batch ID: **47301** RunNo: **62788**

Prep Date: **9/5/2019** Analysis Date: **9/9/2019** SeqNo: **2139150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Molybdenum	0.48	0.0080	0.5000	0	95.5	70	130			
Nickel	0.48	0.010	0.5000	0.02501	91.5	70	130			
Silver	0.10	0.0050	0.1000	0.001660	98.6	70	130			
Zinc	0.49	0.010	0.5000	0	97.4	70	130			

Sample ID: **1908D65-004FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **KA-3** Batch ID: **47301** RunNo: **62788**

Prep Date: **9/5/2019** Analysis Date: **9/9/2019** SeqNo: **2139151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.51	0.0020	0.5000	0	101	70	130	1.07	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0.102	20	
Chromium	0.49	0.0060	0.5000	0	97.1	70	130	0.0225	20	
Cobalt	0.48	0.0060	0.5000	0	96.4	70	130	0.188	20	
Copper	0.51	0.0060	0.5000	0	102	70	130	0.586	20	
Molybdenum	0.48	0.0080	0.5000	0	96.9	70	130	1.54	20	
Nickel	0.48	0.010	0.5000	0.02501	91.2	70	130	0.317	20	
Silver	0.10	0.0050	0.1000	0.001660	99.8	70	130	1.19	20	
Zinc	0.49	0.010	0.5000	0	97.3	70	130	0.153	20	

Sample ID: **1908D65-004FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **KA-3** Batch ID: **47301** RunNo: **62788**

Prep Date: **9/5/2019** Analysis Date: **9/9/2019** SeqNo: **2139153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.0	0.010	0.5000	1.535	97.2	70	130			
Boron	1.2	0.20	0.5000	0.6972	100	70	130			
Iron	2.1	0.10	0.5000	1.627	92.3	70	130			
Manganese	2.2	0.010	0.5000	1.708	100	70	130			

Sample ID: **1908D65-004FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **KA-3** Batch ID: **47301** RunNo: **62788**

Prep Date: **9/5/2019** Analysis Date: **9/9/2019** SeqNo: **2139154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.0	0.010	0.5000	1.535	84.9	70	130	3.09	20	
Boron	1.2	0.20	0.5000	0.6972	90.9	70	130	3.94	20	
Iron	2.0	0.10	0.5000	1.627	84.1	70	130	1.99	20	
Manganese	2.1	0.010	0.5000	1.708	87.1	70	130	3.01	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908D65-005FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **Napis-3** Batch ID: **47301** RunNo: **62788**

Prep Date: **9/5/2019** Analysis Date: **9/9/2019** SeqNo: **2139160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.66	0.0020	0.5000	0.2057	91.3	70	130			
Beryllium	0.50	0.0020	0.5000	0	101	70	130			
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Chromium	0.49	0.0060	0.5000	0.007304	96.1	70	130			
Cobalt	0.48	0.0060	0.5000	0	95.9	70	130			
Copper	0.51	0.0060	0.5000	0.009270	101	70	130			
Manganese	0.68	0.0020	0.5000	0.2066	95.0	70	130			
Molybdenum	0.47	0.0080	0.5000	0	94.8	70	130			
Nickel	0.47	0.010	0.5000	0.01999	90.7	70	130			
Silver	0.099	0.0050	0.1000	0	98.5	70	130			
Zinc	0.56	0.010	0.5000	0.07318	97.5	70	130			

Sample ID: **1908D65-005FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**

Client ID: **Napis-3** Batch ID: **47301** RunNo: **62788**

Prep Date: **9/5/2019** Analysis Date: **9/9/2019** SeqNo: **2139161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.67	0.0020	0.5000	0.2057	92.1	70	130	0.627	20	
Beryllium	0.52	0.0020	0.5000	0	103	70	130	2.38	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0.885	20	
Chromium	0.49	0.0060	0.5000	0.007304	97.1	70	130	1.08	20	
Cobalt	0.49	0.0060	0.5000	0	97.1	70	130	1.25	20	
Copper	0.52	0.0060	0.5000	0.009270	103	70	130	1.51	20	
Manganese	0.69	0.0020	0.5000	0.2066	97.5	70	130	1.85	20	
Molybdenum	0.48	0.0080	0.5000	0	95.2	70	130	0.339	20	
Nickel	0.48	0.010	0.5000	0.01999	91.9	70	130	1.22	20	
Silver	0.099	0.0050	0.1000	0	98.8	70	130	0.289	20	
Zinc	0.57	0.010	0.5000	0.07318	99.0	70	130	1.31	20	

Sample ID: **1908D65-005FMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**

Client ID: **Napis-3** Batch ID: **47301** RunNo: **62788**

Prep Date: **9/5/2019** Analysis Date: **9/9/2019** SeqNo: **2139163** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.8	0.20	0.5000	2.352	88.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908D65-005FMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Metals**
Client ID: **Napis-3**	Batch ID: **47301**	RunNo: **62788**
Prep Date: **9/5/2019**	Analysis Date: **9/9/2019**	SeqNo: **2139164** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.8	0.20	0.5000	2.352	92.0	70	130	0.579	20	

Sample ID: **MB-47376**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142401** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Iron	ND	0.020								
Manganese	ND	0.0020								

Sample ID: **LLLCS-47376**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142402** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.010	0.020	0.01000	0	103	50	150			J
Iron	0.023	0.020	0.02000	0	113	50	150			
Manganese	0.0027	0.0020	0.002000	0	134	50	150			

Sample ID: **LCS-47376**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47376**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	111	85	115			
Iron	0.49	0.020	0.5000	0	97.8	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			

Sample ID: **MB-47377**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **47377**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS-47377**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47377**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	120	50	150			J

Sample ID: **LCS-47377**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47377**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	111	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145669** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0094	0.020	0.01000	0	93.8	50	150			J
Barium	0.0021	0.0020	0.002000	0	106	50	150			
Beryllium	0.0021	0.0020	0.002000	0	104	50	150			
Boron	0.040	0.040	0.04000	0	101	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	0.55	1.0	0.5000	0	110	50	150			J
Chromium	0.0063	0.0060	0.006000	0	104	50	150			
Cobalt	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0060	0.0060	0.006000	0	99.6	50	150			J
Iron	0.020	0.020	0.02000	0	99.2	50	150			J
Magnesium	0.53	1.0	0.5000	0	105	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Molybdenum	0.0092	0.0080	0.008000	0	115	50	150			
Nickel	0.0067	0.010	0.005000	0	134	50	150			J
Potassium	0.40	1.0	0.5000	0	79.6	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Sodium	0.55	1.0	0.5000	0	111	50	150			J
Zinc	0.013	0.010	0.01000	0	128	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B62943**	RunNo: **62943**
Prep Date:	Analysis Date: **9/14/2019**	SeqNo: **2145672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Beryllium	0.49	0.0020	0.5000	0	97.7	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.0	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Nickel	0.48	0.010	0.5000	0	96.1	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-47301** SampType: **MBLK** TestCode: **EPA 200.8: Metals**
Client ID: **PBW** Batch ID: **47301** RunNo: **62715**
Prep Date: **9/5/2019** Analysis Date: **9/5/2019** SeqNo: **2135685** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **MSLLLCS-47301** SampType: **LCSLL** TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC** Batch ID: **47301** RunNo: **62715**
Prep Date: **9/5/2019** Analysis Date: **9/5/2019** SeqNo: **2135689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00099	0.0010	0.001000	0	99.4	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00074	0.0010	0.001000	0	73.6	50	150			J
Thallium	0.00045	0.00050	0.0005000	0	89.7	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID: **MSLCS-47301** SampType: **LCS** TestCode: **EPA 200.8: Metals**
Client ID: **LCSW** Batch ID: **47301** RunNo: **62715**
Prep Date: **9/5/2019** Analysis Date: **9/5/2019** SeqNo: **2135691** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	106	85	115			
Arsenic	0.025	0.0010	0.02500	0	98.6	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Selenium	0.023	0.0010	0.02500	0	90.4	85	115			
Thallium	0.012	0.00050	0.01250	0	96.3	85	115			
Uranium	0.012	0.00050	0.01250	0	98.8	85	115			

Sample ID: **1908D65-003FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **Napis-2** Batch ID: **47301** RunNo: **62715**
Prep Date: **9/5/2019** Analysis Date: **9/5/2019** SeqNo: **2135706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	106	70	130			
Arsenic	0.030	0.0010	0.02500	0.004353	103	70	130			
Lead	0.014	0.00050	0.01250	0.002068	92.8	70	130			
Selenium	0.025	0.0010	0.02500	0	98.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **1908D65-003FMSLL** SampType: **MSLL** TestCode: **EPA 200.8: Metals**
Client ID: **Napis-2** Batch ID: **47301** RunNo: **62715**
Prep Date: **9/5/2019** Analysis Date: **9/5/2019** SeqNo: **2135706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.011	0.00050	0.01250	0	91.9	70	130			
Uranium	0.012	0.00050	0.01250	0.0002054	97.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **C62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133308** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **C62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133311** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.7	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.0	50	150			J
Selenium	0.0012	0.0010	0.001000	0	123	50	150			
Thallium	0.00048	0.00050	0.0005000	0	95.2	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **C62654** RunNo: **62654**
Prep Date: Analysis Date: **9/4/2019** SeqNo: **2133312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	85	115			
Lead	0.012	0.00050	0.01250	0	97.5	85	115			
Selenium	0.024	0.0010	0.02500	0	95.7	85	115			
Thallium	0.012	0.00050	0.01250	0	97.4	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **A62791** RunNo: **62791**
Prep Date: Analysis Date: **9/9/2019** SeqNo: **2139237** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010								J
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0012	0.0010	0.001000	0	119	50	150			
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.5	50	150			J
Selenium	0.0013	0.0010	0.001000	0	134	50	150			
Thallium	0.00047	0.00050	0.0005000	0	93.7	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.6	50	150			J

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62791**	RunNo: **62791**
Prep Date:	Analysis Date: **9/9/2019**	SeqNo: **2139239** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.3	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.1	85	115			
Selenium	0.025	0.0010	0.02500	0	99.5	85	115			
Thallium	0.012	0.00050	0.01250	0	95.8	85	115			
Uranium	0.012	0.00050	0.01250	0	94.6	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B63058**	RunNo: **63058**
Prep Date:	Analysis Date: **9/19/2019**	SeqNo: **2152103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Lead	ND	0.00050								
Thallium	ND	0.00050								
Uranium	ND	0.00050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B63058**	RunNo: **63058**
Prep Date:	Analysis Date: **9/19/2019**	SeqNo: **2152106** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00084	0.0010	0.001000	0	84.4	50	150			J
Lead	0.00052	0.00050	0.0005000	0	104	50	150			
Thallium	0.00050	0.00050	0.0005000	0	100	50	150			
Uranium	0.00053	0.00050	0.0005000	0	105	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B63058**	RunNo: **63058**
Prep Date:	Analysis Date: **9/19/2019**	SeqNo: **2152107** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	95.2	85	115			
Lead	0.012	0.00050	0.01250	0	99.3	85	115			
Thallium	0.012	0.00050	0.01250	0	99.9	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB-47429**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW**	Batch ID: **47429**	RunNo: **62872**
Prep Date: **9/11/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142315** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000090	0.00020								J

Sample ID: **LCS-47429**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW**	Batch ID: **47429**	RunNo: **62872**
Prep Date: **9/11/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142319** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0043	0.00020	0.005000	0	86.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R62406** RunNo: **62406**
Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121353** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	0.034	0.10								J
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R62406** RunNo: **62406**
Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121354** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.9	0.50	5.000	0	97.1	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.3	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.0	90	110			
Sulfate	9.8	0.50	10.00	0	98.0	90	110			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R62407** RunNo: **62407**
Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121454** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R62407** RunNo: **62407**
Prep Date: Analysis Date: **8/23/2019** SeqNo: **2121456** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.7	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62407**	RunNo: **62407**
Prep Date:	Analysis Date: **8/23/2019**	SeqNo: **2121456** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.1	90	110			
Sulfate	9.9	0.50	10.00	0	99.3	90	110			

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R62751**	RunNo: **62751**
Prep Date:	Analysis Date: **9/7/2019**	SeqNo: **2137336** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R62751**	RunNo: **62751**
Prep Date:	Analysis Date: **9/7/2019**	SeqNo: **2137337** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.6	90	110			
Bromide	2.5	0.10	2.500	0	98.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **LCS-47050**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **47050**	RunNo: **62446**
Prep Date: **8/26/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123786** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	103	71.8	135			
Surr: DNOP	0.50		0.5000		101	70	130			

Sample ID: **MB-47050**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **47050**	RunNo: **62446**
Prep Date: **8/26/2019**	Analysis Date: **8/27/2019**	SeqNo: **2123787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		112	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**

26-Sep-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **RB-II**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **B62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122358** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		101	65.8	143			

Sample ID: **2.5UG GRO LCS-II**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **B62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.4	73.6	119			
Surr: BFB	26		20.00		129	65.8	143			

Sample ID: **1908D65-009AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **East LDU**	Batch ID: **B62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/26/2019**	SeqNo: **2122386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.4	0.25	2.500	2.250	87.9	65.4	140			
Surr: BFB	140		100.0		144	65.8	143			S

Sample ID: **1908D65-009AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **East LDU**	Batch ID: **B62420**	RunNo: **62420**
Prep Date:	Analysis Date: **8/27/2019**	SeqNo: **2122387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.2	0.25	2.500	2.250	78.6	65.4	140	5.36	20	
Surr: BFB	140		100.0		144	65.8	143	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R62438**	RunNo: **62438**
Prep Date:	Analysis Date: **8/27/2019**	SeqNo: **2123335** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.7	70	130			
Toluene	19	1.0	20.00	0	94.5	70	130			
Chlorobenzene	20	1.0	20.00	0	98.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	90.4	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.6	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.7	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62438**	RunNo: **62438**
Prep Date:	Analysis Date: **8/27/2019**	SeqNo: **2123336** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	0.31	2.0								J
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.97	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	0.53	2.0								J
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R62438**	RunNo: **62438**
Prep Date:	Analysis Date: **8/27/2019**	SeqNo: **2123336** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.7	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R62438** RunNo: **62438**
Prep Date: Analysis Date: **8/27/2019** SeqNo: **2123336** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID: **1908D65-005ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Napis-3** Batch ID: **R62438** RunNo: **62438**
Prep Date: Analysis Date: **8/27/2019** SeqNo: **2124750** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0.5420	94.4	70	130			
Toluene	20	1.0	20.00	0	98.8	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.9	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.2	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.3	70	130			
Surr: Toluene-d8	9.6		10.00		95.9	70	130			

Sample ID: **1908D65-005amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Napis-3** Batch ID: **R62438** RunNo: **62438**
Prep Date: Analysis Date: **8/27/2019** SeqNo: **2124751** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0.5420	88.3	70	130	6.45	20	
Toluene	18	1.0	20.00	0	91.7	70	130	7.51	20	
Chlorobenzene	20	1.0	20.00	0	99.5	70	130	6.78	20	
1,1-Dichloroethene	17	1.0	20.00	0	86.4	70	130	6.17	20	
Trichloroethene (TCE)	17	1.0	20.00	0	85.0	70	130	6.29	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.8		10.00		98.4	70	130	0	0	
Surr: Dibromofluoromethane	9.6		10.00		96.0	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		95.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcs-47026** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **47026** RunNo: **62538**
Prep Date: **8/26/2019** Analysis Date: **8/29/2019** SeqNo: **2127567** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.0	32.2	94			
4-Chloro-3-methylphenol	140	10	200.0	0	68.6	37.7	101			
2-Chlorophenol	130	10	200.0	0	66.4	32.6	90.1			
1,4-Dichlorobenzene	57	10	100.0	0	56.9	30	87.2			
2,4-Dinitrotoluene	62	10	100.0	0	61.7	35.9	85.8			
N-Nitrosodi-n-propylamine	68	10	100.0	0	67.7	37.1	108			
4-Nitrophenol	110	10	200.0	0	54.5	22.4	86.6			
Pentachlorophenol	110	20	200.0	0	53.9	31.6	91			
Phenol	110	10	200.0	0	55.6	21.7	84.9			
Pyrene	61	10	100.0	0	61.1	46.3	103			
1,2,4-Trichlorobenzene	58	10	100.0	0	57.6	30.2	88.3			
Surr: 2-Fluorophenol	120		200.0		59.2	15	101			
Surr: Phenol-d5	120		200.0		58.0	15	84.6			
Surr: 2,4,6-Tribromophenol	120		200.0		58.0	27.8	112			
Surr: Nitrobenzene-d5	76		100.0		76.4	33	113			
Surr: 2-Fluorobiphenyl	64		100.0		63.7	26.6	107			
Surr: 4-Terphenyl-d14	61		100.0		60.6	18.7	148			

Sample ID: **lcsd-47026** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **47026** RunNo: **62538**
Prep Date: **8/26/2019** Analysis Date: **8/29/2019** SeqNo: **2127570** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	84.5	32.2	94	24.6	32.9	
4-Chloro-3-methylphenol	170	10	200.0	0	85.5	37.7	101	21.9	29.9	
2-Chlorophenol	170	10	200.0	0	84.1	32.6	90.1	23.5	28.5	
1,4-Dichlorobenzene	72	10	100.0	0	71.8	15	87.2	23.2	44.9	
2,4-Dinitrotoluene	80	10	100.0	0	80.2	35.9	85.8	26.0	28.5	
N-Nitrosodi-n-propylamine	91	10	100.0	0	90.9	37.1	108	29.3	29.9	
4-Nitrophenol	120	10	200.0	0	58.5	15	86.6	7.19	68	
Pentachlorophenol	130	20	200.0	0	66.7	31.6	91	21.3	39.5	
Phenol	130	10	200.0	0	66.4	15	84.9	17.8	44.2	
Pyrene	75	10	100.0	0	75.3	46.3	103	20.9	23.8	
1,2,4-Trichlorobenzene	71	10	100.0	0	70.6	15.7	88.3	20.2	38	
Surr: 2-Fluorophenol	150		200.0		73.6	15	101	0	0	
Surr: Phenol-d5	140		200.0		68.1	15	84.6	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		72.2	27.8	112	0	0	
Surr: Nitrobenzene-d5	91		100.0		90.6	33	113	0	0	
Surr: 2-Fluorobiphenyl	77		100.0		77.4	26.6	107	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **lcsd-47026**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **47026**	RunNo: **62538**
Prep Date: **8/26/2019**	Analysis Date: **8/29/2019**	SeqNo: **2127570** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	76		100.0		76.3	18.7	148	0	0	

Sample ID: **mb-47026**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **47026**	RunNo: **62538**
Prep Date: **8/26/2019**	Analysis Date: **8/29/2019**	SeqNo: **2127573** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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P	Sample pH Not In Range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-47026**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **47026**	RunNo: **62538**	
Prep Date: **8/26/2019**	Analysis Date: **8/29/2019**	SeqNo: **2127573**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D65**
26-Sep-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd QTR GW Sampling

Sample ID: **mb-47026** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **47026** RunNo: **62538**
Prep Date: **8/26/2019** Analysis Date: **8/29/2019** SeqNo: **2127573** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		58.6	15	101			
Surr: Phenol-d5	110		200.0		52.8	15	84.6			
Surr: 2,4,6-Tribromophenol	150		200.0		73.6	27.8	112			
Surr: Nitrobenzene-d5	82		100.0		82.3	33	113			
Surr: 2-Fluorobiphenyl	72		100.0		71.8	26.6	107			
Surr: 4-Terphenyl-d14	77		100.0		76.7	18.7	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 29, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1133112

Samples Received: 08/27/2019

Project Number:

Description:

Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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1908D65-006G OAPIS-1 L1133112-01 WW

			Collected by	Collected date/time	Received date/time
				08/22/19 11:30	08/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1335982	1	08/28/19 15:31	08/29/19 10:51	SDL	Mt. Juliet, TN

1908D65-007G DUPLICATE L1133112-02 WW

			Collected by	Collected date/time	Received date/time
				08/22/19 11:30	08/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1335982	1	08/28/19 15:31	08/29/19 10:52	SDL	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0658		0.00500	1	08/29/2019 10:51	WG1335982

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0612		0.00500	1	08/29/2019 10:52	WG1335982

Method Blank (MB)

(MB) R3445450-1 08/29/19 10:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1133104-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1133104-01 08/29/19 10:49 • (DUP) R3445450-5 08/29/19 10:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

L1133580-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1133580-01 08/29/19 11:05 • (DUP) R3445450-8 08/29/19 11:06

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	0.00229	0.000	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3445450-2 08/29/19 10:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0976	97.6	85.0-115	

L1132308-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132308-02 08/29/19 10:42 • (MS) R3445450-3 08/29/19 10:43 • (MSD) R3445450-4 08/29/19 10:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0781	0.0840	78.1	84.0	1	75.0-125			7.28	20

L1133136-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133136-01 08/29/19 10:54 • (MS) R3445450-6 08/29/19 10:55 • (MSD) R3445450-7 08/29/19 10:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.0374	0.119	0.127	81.6	89.6	1	75.0-125			6.50	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
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Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
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Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
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State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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Our Locations

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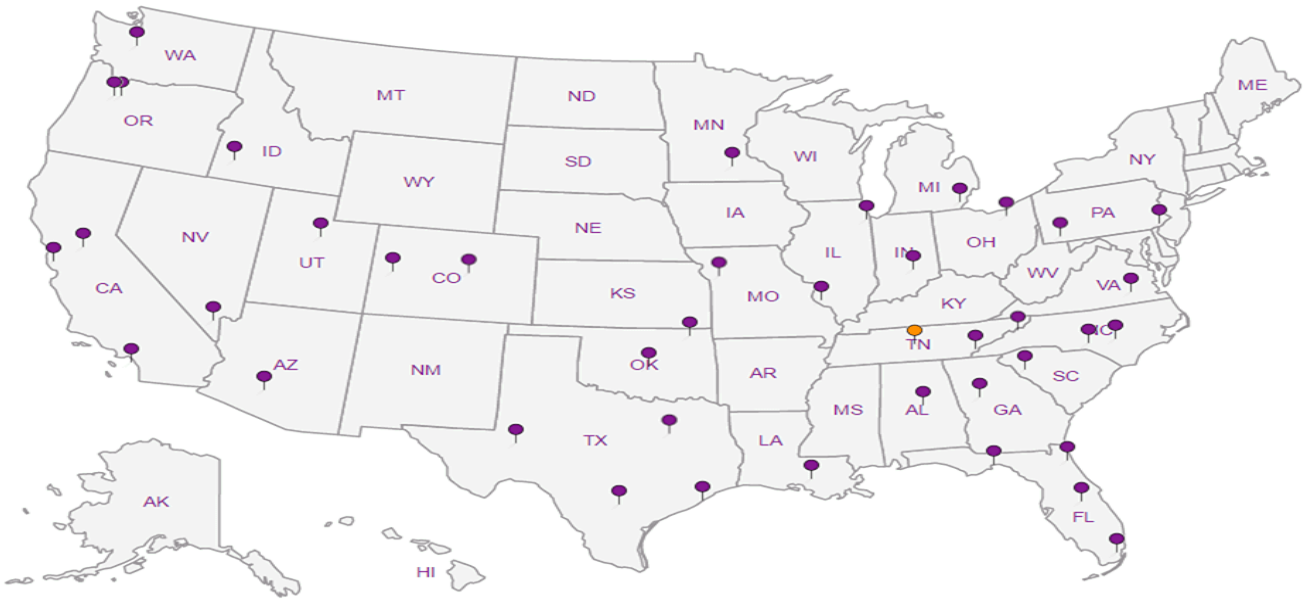

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

C080

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

L1133112

SUB CONTRATOR: **ESC PACE**	COMPANY: **ESC PACE**	PHONE: **(800) 767-5859**	FAX: **(615) 758-5859**		
ADDRESS: **12065 Lebanon Rd**		ACCOUNT #:	EMAIL:		
CITY, STATE, ZIP: **Mt. Juliet, TN 37122**					

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1908D65-006G	OAPIS-1	500AMBHDP E-NAOH	Aqueous	8/22/2019 11:30:00 AM	1	Total CN **LV 4** 712 -01
2	1908D65-007G	Duplicate	500AMBHDP E-NAOH	Aqueous	8/22/2019 11:30:00 AM	1	Total CN **LV 4** -02

Fedex 4510 1668 8473

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

RAD SCREEN: <0.5 mR/hr

Relinquished By:	Date: 8/22/2019	Time: 7:24 PM	Received By:	Date: 8/27/19	Time: 8:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

COC's FOR LAB USE ONLY

Temp of samples 0.9, 3.2 °C Attempt to Cool ? Y

Comments:

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: HALLENVANM	SDG#:	L1133112
Cooler Received/Opened On: 8/27/19	Temperature:	0-8
Received By: Adam Burns		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1908D65** RcptNo: **1**

Received By: **Leah Baca** **8/22/2019 4:23:00 PM** Leah SBaca

Completed By: **Leah Baca** **8/22/2019 7:11:37 PM** Leah SBaca

Reviewed By: 8/23/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 20 2 (<2 or >12 unless noted)
Adjusted? Yes *
Checked by: JC 8-23-19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks: * West CDV added 0.5mL HNO3 for total Metals. JC 8-23-19
17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			
2	5.1	Good	Yes			
3	1.4	Good	Yes			
4	2.3	Good	Yes			

Chain-of-Custody Record

Client: MARATHON - Western Refining

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard Rush_____

Project Name:

2019 ANNUAL/3Rd QTR GW SAMPLING

Project #:

NAPIS, OAPIS, LDU, OW60

Project Manager:

BRIAN MOORE (BMOORE1@MARATHONPETROLEUM.COM)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1908D65	Analysis Request: 8260B	8015D (DRO/GRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011 FOR EDB	CYANIDE	Air Bubbles (Y or N)
8/22/19	0700	AQUEOUS	Field Blk	MISC	MISC	-001	X								
	0700	AQUEOUS	Trip Blank	MISC	MISC	-002	X								
	0855	AQUEOUS	NAPIS-2	MISC	MISC	-003	X	X	X	X	X	X			
	0935	AQUEOUS	KA-3	MISC	MISC	-004	X	X	X	X	X	X			
	1030	AQUEOUS	NAPIS-3	MISC	MISC	-005	X	X	X	X	X	X			
	1130	AQUEOUS	OAPIS-1	MISC	MISC	-006	X	X	X	X	X	X		X	
	1130	AQUEOUS	Duplicate	MISC	MISC	-007	X	X	X	X	X	X		X	
	1015	AQUEOUS	West LDU	MISC	MISC	-008	X	X		X	X				
	1620	AQUEOUS	East LDU	MISC	MISC	-009	X	X		X	X				
8/21/19	1554	AQUEOUS	OW-60	MISC	MISC	-010	X	X	X	X	X	X			
		AQUEOUS		MISC	MISC	~~-011~~									
		AQUEOUS		MISC	MISC	LAS 8/22/19									
		AQUEOUS		MISC	MISC										
		AQUEOUS		MISC	MISC										
		AQUEOUS													

Date	Time	Relinquished by	Received by	Date	Time
8/22/19	1240		Eugene Ulgil	8/22/19	1250
8/22/19	1623	Eugene Ulgil	Leah Baca	8/22/19	1623

Remarks: Temp. 1.6, 5.1, 1.4, 2.3, 4.4, 5.3 CF=0

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 29, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1133112

Samples Received: 08/27/2019

Project Number:

Description:

Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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Sc: Sample Chain of Custody 10

1908D65-006G OAPIS-1 L1133112-01 WW

			Collected by	Collected date/time	Received date/time
				08/22/19 11:30	08/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1335982	1	08/28/19 15:31	08/29/19 10:51	SDL	Mt. Juliet, TN

1908D65-007G DUPLICATE L1133112-02 WW

			Collected by	Collected date/time	Received date/time
				08/22/19 11:30	08/27/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1335982	1	08/28/19 15:31	08/29/19 10:52	SDL	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0658		0.00500	1	08/29/2019 10:51	WG1335982

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0612		0.00500	1	08/29/2019 10:52	WG1335982

Method Blank (MB)

(MB) R3445450-1 08/29/19 10:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1133104-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1133104-01 08/29/19 10:49 • (DUP) R3445450-5 08/29/19 10:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

L1133580-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1133580-01 08/29/19 11:05 • (DUP) R3445450-8 08/29/19 11:06

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	0.00229	0.000	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3445450-2 08/29/19 10:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0976	97.6	85.0-115	

L1132308-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132308-02 08/29/19 10:42 • (MS) R3445450-3 08/29/19 10:43 • (MSD) R3445450-4 08/29/19 10:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0781	0.0840	78.1	84.0	1	75.0-125			7.28	20

L1133136-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133136-01 08/29/19 10:54 • (MS) R3445450-6 08/29/19 10:55 • (MSD) R3445450-7 08/29/19 10:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.0374	0.119	0.127	81.6	89.6	1	75.0-125			6.50	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
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Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
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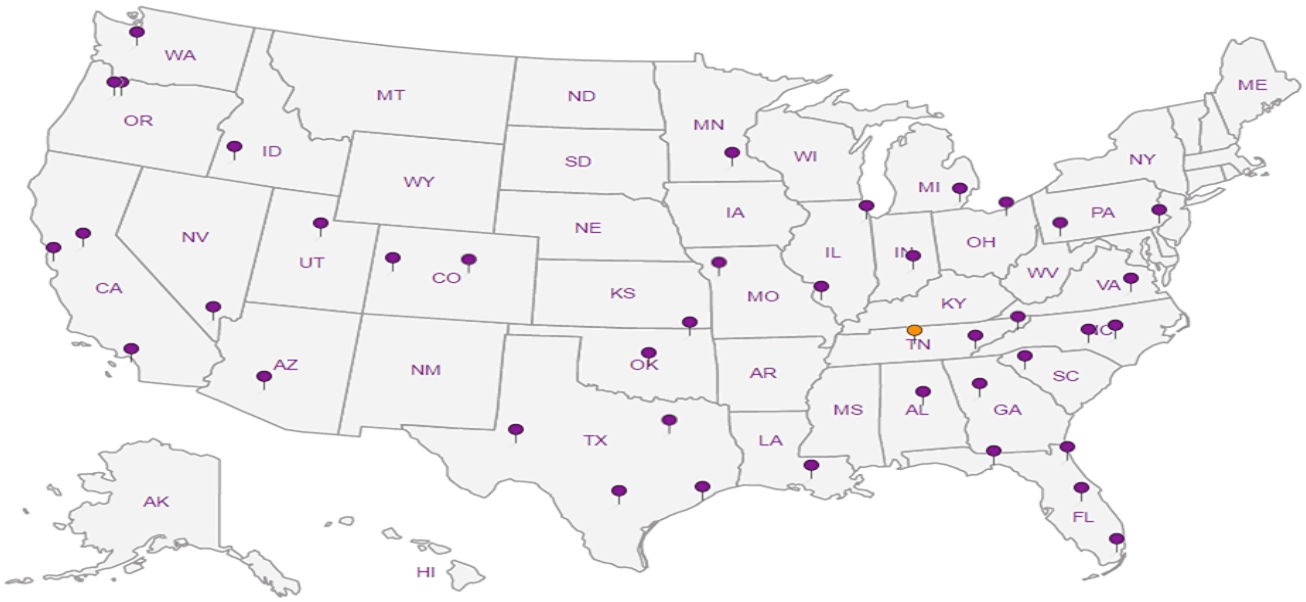

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

C080

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

L1133112

SUB CONTRATOR: **ESC PACE**	COMPANY: **ESC PACE**	PHONE: **(800) 767-5859**	FAX: **(615) 758-5859**		
ADDRESS: **12065 Lebanon Rd**		ACCOUNT #:	EMAIL:		
CITY, STATE, ZIP: **Mt. Juliet, TN 37122**					

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1908D65-006G	OAPIS-1	500AMBHDP E-NAOH	Aqueous	8/22/2019 11:30:00 AM	1	Total CN **LV 4** 712 -01
2	1908D65-007G	Duplicate	500AMBHDP E-NAOH	Aqueous	8/22/2019 11:30:00 AM	1	Total CN **LV 4** -02

Fedex 4510 1668 8473

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

RAD SCREEN: <0.5 mR/hr

Relinquished By:	Date: 8/22/2019	Time: 7:24 PM	Received By:	Date: 8/27/19	Time: 8:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

COC's FOR LAB USE ONLY

Temp of samples 0.9, 3.2 °C Attempt to Cool ? Y

Comments:

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: HALLENVANM	SDG#:	L1133112
Cooler Received/Opened On: 8/27/19	Temperature:	0-8
Received By: Adam Burns		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 30, 2019

Brian Moore
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2019 Annual 3rd Qtr GW Sampling OrderNo.: 1908D66

Dear Brian Moore:

Hall Environmental Analysis Laboratory received 12 sample(s) on 8/22/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
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Website: www.hallenvironmental.com

Case Narrative

WO#: **1908D66**
Date: **9/30/2019**

CLIENT: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Analytical Notes Regarding EPA Method 8270:
Sample MKTF-43 was broken during the extraction process. This sample was not able to be reported due to insufficient volume for reextraction. The duplicate sample was from MKTF-43 and the 8270 data could be used for the MKTF-43 data.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EB-3
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:15:00 PM
Lab ID: 1908D66-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0094		µg/L	1	8/29/2019 1:36:22 AM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/27/2019 6:42:01 PM	47079
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 6:42:01 PM	47079
Surr: DNOP	98.8	0	70-130		%Rec	1	8/27/2019 6:42:01 PM	47079
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/27/2019 1:04:12 AM	B62420
Surr: BFB	97.1	0	65.8-143		%Rec	1	8/27/2019 1:04:12 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.015	0.10		mg/L	1	8/23/2019 8:54:55 PM	A62406
Chloride	ND	0.50	0.50		mg/L	1	8/23/2019 8:54:55 PM	A62406
Nitrogen, Nitrite (As N)	ND	0.0054	0.10		mg/L	1	8/23/2019 8:54:55 PM	A62406
Bromide	ND	0.018	0.10		mg/L	1	8/23/2019 8:54:55 PM	A62406
Nitrogen, Nitrate (As N)	0.053	0.0050	0.10	J	mg/L	1	8/23/2019 8:54:55 PM	A62406
Phosphorus, Orthophosphate (As P)	ND	0.25	0.50		mg/L	1	8/23/2019 8:54:55 PM	A62406
Sulfate	ND	0.067	0.50		mg/L	1	8/23/2019 8:54:55 PM	A62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/16/2019 2:44:38 PM	A62967
Barium	ND	0.00065	0.0020		mg/L	1	9/16/2019 2:44:38 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 2:44:38 PM	A62967
Boron	0.0098	0.0045	0.040	J	mg/L	1	9/16/2019 2:44:38 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 2:44:38 PM	A62967
Calcium	ND	0.062	1.0		mg/L	1	9/16/2019 2:44:38 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 2:44:38 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 2:44:38 PM	A62967
Copper	ND	0.0013	0.0060		mg/L	1	9/16/2019 2:44:38 PM	A62967
Iron	ND	0.0087	0.020		mg/L	1	9/16/2019 2:44:38 PM	A62967
Magnesium	ND	0.050	1.0		mg/L	1	9/16/2019 2:44:38 PM	A62967
Manganese	ND	0.00029	0.0020		mg/L	1	9/16/2019 2:44:38 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 2:44:38 PM	A62967
Nickel	ND	0.0040	0.010		mg/L	1	9/16/2019 2:44:38 PM	A62967
Potassium	ND	0.16	1.0		mg/L	1	9/16/2019 2:44:38 PM	A62967
Silver	ND	0.00094	0.0050		mg/L	1	9/16/2019 2:44:38 PM	A62967
Sodium	ND	0.42	1.0		mg/L	1	9/16/2019 2:44:38 PM	A62967
Zinc	0.0051	0.0023	0.010	J	mg/L	1	9/16/2019 2:44:38 PM	A62967

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EB-3
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:15:00 PM
Lab ID: 1908D66-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/12/2019 10:28:57 AM	A62874
Barium	ND	0.00065	0.0020		mg/L	1	9/12/2019 10:28:57 AM	A62874
Beryllium	ND	0.00028	0.0020		mg/L	1	9/12/2019 10:28:57 AM	A62874
Boron	0.011	0.0045	0.040	J	mg/L	1	9/12/2019 10:28:57 AM	A62874
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 10:28:57 AM	A62874
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 10:28:57 AM	A62874
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 10:28:57 AM	A62874
Copper	ND	0.0041	0.0060		mg/L	1	9/12/2019 10:28:57 AM	A62874
Iron	ND	0.0087	0.020		mg/L	1	9/12/2019 10:28:57 AM	A62874
Manganese	ND	0.00029	0.0020		mg/L	1	9/12/2019 10:28:57 AM	A62874
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 10:28:57 AM	A62874
Nickel	ND	0.0040	0.010		mg/L	1	9/12/2019 10:28:57 AM	A62874
Silver	ND	0.0014	0.0050		mg/L	1	9/12/2019 10:28:57 AM	A62874
Zinc	ND	0.0058	0.010		mg/L	1	9/12/2019 10:28:57 AM	A62874
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00054	0.00039	0.0010	J	mg/L	1	9/9/2019 6:38:55 PM	B62791
Arsenic	ND	0.00010	0.0010		mg/L	1	9/9/2019 6:38:55 PM	B62791
Lead	ND	0.000055	0.00050		mg/L	1	9/9/2019 6:38:55 PM	B62791
Selenium	ND	0.00017	0.0010		mg/L	1	9/9/2019 6:38:55 PM	B62791
Thallium	ND	0.000048	0.00050		mg/L	1	9/9/2019 6:38:55 PM	B62791
Uranium	ND	0.000075	0.00050		mg/L	1	9/10/2019 6:55:51 PM	B62810
EPA 200.8: METALS							Analyst: **DBK**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/12/2019 7:33:34 PM	A62885
Arsenic	ND	0.00031	0.0010		mg/L	1	9/10/2019 5:41:04 PM	A62810
Lead	ND	0.000055	0.00050		mg/L	1	9/10/2019 5:41:04 PM	A62810
Selenium	ND	0.00048	0.0010		mg/L	1	9/10/2019 5:41:04 PM	A62810
Thallium	ND	0.000052	0.00050		mg/L	1	9/10/2019 5:41:04 PM	A62810
Uranium	0.00010	0.000085	0.00050	J	mg/L	1	9/12/2019 7:33:34 PM	A62885
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000079	0.000038	0.00020	J	mg/L	1	9/13/2019 10:14:16 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Aniline	ND	3.6	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 10:26:05 PM	47062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: EB-3
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:15:00 PM
Lab ID: 1908D66-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 10:26:05 PM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 10:26:05 PM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 10:26:05 PM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 10:26:05 PM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 10:26:05 PM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 10:26:05 PM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 10:26:05 PM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 10:26:05 PM	47062
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 10:26:05 PM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 10:26:05 PM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 10:26:05 PM	47062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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PQL	Practical Quanitative Limit
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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: EB-3
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:15:00 PM
Lab ID: 1908D66-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 10:26:05 PM	47062
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 10:26:05 PM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 10:26:05 PM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Naphthalene	ND	4.1	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 10:26:05 PM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 10:26:05 PM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 10:26:05 PM	47062
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Phenol	ND	8.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 10:26:05 PM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 10:26:05 PM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 10:26:05 PM	47062
Surr: 2-Fluorophenol	51.2	0	15-101		%Rec	1	8/29/2019 10:26:05 PM	47062
Surr: Phenol-d5	40.1	0	15-84.6		%Rec	1	8/29/2019 10:26:05 PM	47062
Surr: 2,4,6-Tribromophenol	62.8	0	27.8-112		%Rec	1	8/29/2019 10:26:05 PM	47062
Surr: Nitrobenzene-d5	76.8	0	33-113		%Rec	1	8/29/2019 10:26:05 PM	47062
Surr: 2-Fluorobiphenyl	67.6	0	26.6-107		%Rec	1	8/29/2019 10:26:05 PM	47062
Surr: 4-Terphenyl-d14	71.7	0	18.7-148		%Rec	1	8/29/2019 10:26:05 PM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EB-3
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:15:00 PM
Lab ID: 1908D66-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Acetone	7.5	1.2	10	J	µg/L	1	8/27/2019 6:29:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 6:29:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 6:29:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 6:29:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 6:29:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: EB-3
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:15:00 PM
Lab ID: 1908D66-001
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 6:29:00 PM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 6:29:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	8/27/2019 6:29:00 PM	R62438
Surr: 4-Bromofluorobenzene	96.5	0	70-130		%Rec	1	8/27/2019 6:29:00 PM	R62438
Surr: Dibromofluoromethane	96.3	0	70-130		%Rec	1	8/27/2019 6:29:00 PM	R62438
Surr: Toluene-d8	94.6	0	70-130		%Rec	1	8/27/2019 6:29:00 PM	R62438

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 11:44:00 AM
Lab ID: 1908D66-002
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	3.0	0.35	1.0		mg/L	1	8/27/2019 10:13:54 PM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 10:13:54 PM	47050
Surr: DNOP	114	0	70-130		%Rec	1	8/27/2019 10:13:54 PM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	35	1.1	2.5		mg/L	50	8/27/2019 1:27:11 AM	B62420
Surr: BFB	117	0	65.8-143		%Rec	50	8/27/2019 1:27:11 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.91	0.073	0.50		mg/L	5	8/23/2019 10:12:06 PM	A62406
Chloride	960	50	50		mg/L	100	9/9/2019 1:49:45 AM	A62752
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/23/2019 10:12:06 PM	A62406
Bromide	0.64	0.089	0.50		mg/L	5	8/23/2019 10:12:06 PM	A62406
Nitrogen, Nitrate (As N)	0.10	0.025	0.50	J	mg/L	5	8/23/2019 10:12:06 PM	A62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 10:12:06 PM	A62406
Sulfate	ND	0.33	2.5		mg/L	5	8/23/2019 10:12:06 PM	A62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.025	0.0025	0.020		mg/L	1	9/16/2019 3:05:11 PM	A62967
Barium	8.5	0.013	0.040	*	mg/L	20	9/16/2019 3:09:18 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 3:05:11 PM	A62967
Boron	0.50	0.0045	0.040		mg/L	1	9/16/2019 3:05:11 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:05:11 PM	A62967
Calcium	270	0.31	5.0		mg/L	5	9/16/2019 3:07:10 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 3:05:11 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:05:11 PM	A62967
Copper	0.0023	0.0013	0.0060	J	mg/L	1	9/16/2019 3:05:11 PM	A62967
Iron	7.9	0.17	0.40	*	mg/L	20	9/16/2019 3:09:18 PM	A62967
Magnesium	60	0.050	1.0		mg/L	1	9/16/2019 3:05:11 PM	A62967
Manganese	5.4	0.0058	0.040	*	mg/L	20	9/16/2019 3:09:18 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 3:05:11 PM	A62967
Nickel	0.014	0.0040	0.010		mg/L	1	9/16/2019 3:05:11 PM	A62967
Potassium	0.68	0.16	1.0	J	mg/L	1	9/16/2019 3:05:11 PM	A62967
Silver	0.0032	0.00094	0.0050	J	mg/L	1	9/16/2019 3:05:11 PM	A62967
Sodium	390	2.1	5.0		mg/L	5	9/16/2019 3:07:10 PM	A62967
Zinc	0.0057	0.0023	0.010	J	mg/L	1	9/16/2019 3:05:11 PM	A62967
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.84	0.012	0.10	*	mg/L	5	9/14/2019 9:08:30 AM	47377
Barium	8.8	0.013	0.040	*	mg/L	20	9/12/2019 11:35:44 AM	47377
Beryllium	ND	0.00028	0.0020		mg/L	1	9/12/2019 10:44:35 AM	47377

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 11:44:00 AM
Lab ID: 1908D66-002
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.51	0.023	0.20		mg/L	5	9/12/2019 10:50:43 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 10:44:35 AM	47377
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 10:44:35 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 10:44:35 AM	47377
Copper	ND	0.0041	0.0060		mg/L	1	9/12/2019 10:44:35 AM	47377
Iron	11	0.17	0.40	*	mg/L	20	9/12/2019 11:35:44 AM	47377
Manganese	5.6	0.0058	0.040	*	mg/L	20	9/12/2019 11:35:44 AM	47377
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 10:44:35 AM	47377
Nickel	0.015	0.0040	0.010		mg/L	1	9/12/2019 10:44:35 AM	47377
Silver	0.0032	0.0014	0.0050	J	mg/L	1	9/12/2019 10:44:35 AM	47377
Zinc	ND	0.0058	0.010		mg/L	1	9/12/2019 10:44:35 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00046	0.00039	0.0010	J	mg/L	1	9/9/2019 6:41:36 PM	B62791
Arsenic	0.0059	0.00010	0.0010		mg/L	1	9/9/2019 6:41:36 PM	B62791
Lead	0.000083	0.000055	0.00050	J	mg/L	1	9/9/2019 6:41:36 PM	B62791
Selenium	ND	0.00017	0.0010		mg/L	1	9/9/2019 6:41:36 PM	B62791
Thallium	ND	0.000048	0.00050		mg/L	1	9/9/2019 6:41:36 PM	B62791
Uranium	0.00063	0.000075	0.00050		mg/L	1	9/10/2019 6:58:33 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 6:59:17 PM	47301
Arsenic	0.0082	0.00031	0.0010		mg/L	1	9/5/2019 6:59:17 PM	47301
Lead	0.00058	0.000055	0.00050		mg/L	1	9/5/2019 6:59:17 PM	47301
Selenium	ND	0.00048	0.0010		mg/L	1	9/5/2019 6:59:17 PM	47301
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 6:59:17 PM	47301
Uranium	0.00061	0.000085	0.00050		mg/L	1	9/5/2019 6:59:17 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000092	0.000038	0.00020	J	mg/L	1	9/13/2019 10:20:57 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Aniline	ND	3.6	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 10:56:14 PM	47062

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 11:44:00 AM
Lab ID: 1908D66-002
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 10:56:14 PM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 10:56:14 PM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Carbazole	3.1	2.9	10	J	µg/L	1	8/29/2019 10:56:14 PM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 10:56:14 PM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 10:56:14 PM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 10:56:14 PM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 10:56:14 PM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 10:56:14 PM	47062
2,4-Dimethylphenol	23	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 10:56:14 PM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 10:56:14 PM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 10:56:14 PM	47062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 11:44:00 AM
Lab ID: 1908D66-002
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
1-Methylnaphthalene	54	3.1	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2-Methylnaphthalene	76	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2-Methylphenol	9.2	2.9	10	J	µg/L	1	8/29/2019 10:56:14 PM	47062
3+4-Methylphenol	4.7	3.6	10	J	µg/L	1	8/29/2019 10:56:14 PM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 10:56:14 PM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Naphthalene	160	4.1	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 10:56:14 PM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 10:56:14 PM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 10:56:14 PM	47062
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Phenol	26	8.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 10:56:14 PM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 10:56:14 PM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 10:56:14 PM	47062
Surr: 2-Fluorophenol	6.03	0	15-101	S	%Rec	1	8/29/2019 10:56:14 PM	47062
Surr: Phenol-d5	19.8	0	15-84.6		%Rec	1	8/29/2019 10:56:14 PM	47062
Surr: 2,4,6-Tribromophenol	8.18	0	27.8-112	S	%Rec	1	8/29/2019 10:56:14 PM	47062
Surr: Nitrobenzene-d5	86.8	0	33-113		%Rec	1	8/29/2019 10:56:14 PM	47062
Surr: 2-Fluorobiphenyl	82.0	0	26.6-107		%Rec	1	8/29/2019 10:56:14 PM	47062
Surr: 4-Terphenyl-d14	79.1	0	18.7-148		%Rec	1	8/29/2019 10:56:14 PM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	4600	17	100		µg/L	100	8/27/2019 6:53:00 PM	R62438
Toluene	660	3.5	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Ethylbenzene	1600	13	100		µg/L	100	8/27/2019 6:53:00 PM	R62438
Methyl tert-butyl ether (MTBE)	19	4.6	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2,4-Trimethylbenzene	850	2.1	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,3,5-Trimethylbenzene	190	1.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	1.7	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Naphthalene	180	2.8	20		µg/L	10	8/27/2019 7:18:00 PM	R62438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 11:44:00 AM
Lab ID: 1908D66-002
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	66	3.1	40		µg/L	10	8/27/2019 7:18:00 PM	R62438
2-Methylnaphthalene	85	3.5	40		µg/L	10	8/27/2019 7:18:00 PM	R62438
Acetone	100	12	100		µg/L	10	8/27/2019 7:18:00 PM	R62438
Bromobenzene	ND	2.4	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Bromodichloromethane	ND	1.3	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Bromoform	ND	2.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Bromomethane	ND	2.7	30		µg/L	10	8/27/2019 7:18:00 PM	R62438
2-Butanone	ND	21	100		µg/L	10	8/27/2019 7:18:00 PM	R62438
Carbon disulfide	ND	4.5	100		µg/L	10	8/27/2019 7:18:00 PM	R62438
Carbon Tetrachloride	ND	1.4	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Chlorobenzene	ND	1.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Chloroethane	30	1.8	20		µg/L	10	8/27/2019 7:18:00 PM	R62438
Chloroform	ND	1.2	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Chloromethane	ND	3.2	30		µg/L	10	8/27/2019 7:18:00 PM	R62438
2-Chlorotoluene	ND	2.5	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
4-Chlorotoluene	ND	2.3	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
cis-1,2-DCE	34	1.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
cis-1,3-Dichloropropene	ND	1.4	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	3.3	20		µg/L	10	8/27/2019 7:18:00 PM	R62438
Dibromochloromethane	ND	2.4	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Dibromomethane	ND	2.1	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2-Dichlorobenzene	ND	3.0	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,3-Dichlorobenzene	ND	2.5	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,1-Dichloroethane	37	1.4	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,1-Dichloroethene	7.5	2.1	10	J	µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2-Dichloropropane	ND	2.1	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,3-Dichloropropane	ND	2.0	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
2,2-Dichloropropane	ND	2.3	20		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Hexachlorobutadiene	ND	3.1	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
2-Hexanone	ND	15	100		µg/L	10	8/27/2019 7:18:00 PM	R62438
Isopropylbenzene	57	1.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
4-Isopropyltoluene	9.0	2.2	10	J	µg/L	10	8/27/2019 7:18:00 PM	R62438
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	8/27/2019 7:18:00 PM	R62438
Methylene Chloride	ND	1.5	30		µg/L	10	8/27/2019 7:18:00 PM	R62438
n-Butylbenzene	21	2.3	30	J	µg/L	10	8/27/2019 7:18:00 PM	R62438
n-Propylbenzene	120	2.1	10		µg/L	10	8/27/2019 7:18:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 11:44:00 AM
Lab ID: 1908D66-002
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	11	2.5	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Styrene	ND	1.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
tert-Butylbenzene	ND	2.1	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	2.1	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	5.5	20		µg/L	10	8/27/2019 7:18:00 PM	R62438
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
trans-1,3-Dichloropropene	ND	1.7	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2,3-Trichlorobenzene	ND	3.0	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2,4-Trichlorobenzene	ND	2.0	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,1,1-Trichloroethane	ND	1.7	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,1,2-Trichloroethane	ND	2.2	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Trichloroethene (TCE)	ND	1.7	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Trichlorofluoromethane	ND	1.9	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
1,2,3-Trichloropropane	ND	3.0	20		µg/L	10	8/27/2019 7:18:00 PM	R62438
Vinyl chloride	10	1.8	10		µg/L	10	8/27/2019 7:18:00 PM	R62438
Xylenes, Total	7400	45	150		µg/L	100	8/27/2019 6:53:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	96.4	0	70-130		%Rec	10	8/27/2019 7:18:00 PM	R62438
Surr: 4-Bromofluorobenzene	98.4	0	70-130		%Rec	10	8/27/2019 7:18:00 PM	R62438
Surr: Dibromofluoromethane	92.9	0	70-130		%Rec	10	8/27/2019 7:18:00 PM	R62438
Surr: Toluene-d8	98.2	0	70-130		%Rec	10	8/27/2019 7:18:00 PM	R62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 9:40:00 AM
Lab ID: 1908D66-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0033	0.0093		µg/L	1	8/29/2019 1:51:55 AM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/27/2019 10:38:41 PM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 10:38:41 PM	47050
Surr: DNOP	116	0	70-130		%Rec	1	8/27/2019 10:38:41 PM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/27/2019 1:50:13 AM	B62420
Surr: BFB	99.9	0	65.8-143		%Rec	1	8/27/2019 1:50:13 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.074	0.073	0.50	J	mg/L	5	8/23/2019 10:37:49 PM	A62406
Chloride	5100	250	250		mg/L	500	9/9/2019 2:02:09 AM	A62752
Nitrogen, Nitrite (As N)	ND	0.11	2.0		mg/L	20	8/23/2019 10:50:40 PM	A62406
Bromide	2.3	0.089	0.50		mg/L	5	8/23/2019 10:37:49 PM	A62406
Nitrogen, Nitrate (As N)	18	0.025	0.50	*	mg/L	5	8/23/2019 10:37:49 PM	A62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 10:37:49 PM	A62406
Sulfate	560	1.3	10		mg/L	20	8/23/2019 10:50:40 PM	A62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/16/2019 3:11:28 PM	A62967
Barium	0.085	0.00065	0.0020		mg/L	1	9/16/2019 3:11:28 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 3:11:28 PM	A62967
Boron	1.2	0.045	0.40		mg/L	10	9/16/2019 3:13:40 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:11:28 PM	A62967
Calcium	690	0.62	10		mg/L	10	9/16/2019 3:13:40 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 3:11:28 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:11:28 PM	A62967
Copper	0.0090	0.0013	0.0060		mg/L	1	9/16/2019 3:11:28 PM	A62967
Iron	ND	0.0087	0.020		mg/L	1	9/16/2019 3:11:28 PM	A62967
Magnesium	110	0.50	10		mg/L	10	9/16/2019 3:13:40 PM	A62967
Manganese	0.77	0.00029	0.0020	*	mg/L	1	9/16/2019 3:11:28 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 3:11:28 PM	A62967
Nickel	0.0041	0.0040	0.010	J	mg/L	1	9/16/2019 3:11:28 PM	A62967
Potassium	4.6	0.16	1.0		mg/L	1	9/16/2019 3:11:28 PM	A62967
Silver	0.0096	0.00094	0.0050		mg/L	1	9/16/2019 3:11:28 PM	A62967
Sodium	2700	21	50		mg/L	50	9/17/2019 11:29:33 AM	C63004
Zinc	0.0052	0.0023	0.010	J	mg/L	1	9/16/2019 3:11:28 PM	A62967

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Qualifiers:

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 9:40:00 AM
Lab ID: 1908D66-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	5.0	0.025	0.20	*	mg/L	10	9/12/2019 11:37:52 AM	47377
Barium	0.12	0.00065	0.0020		mg/L	1	9/12/2019 10:56:31 AM	47377
Beryllium	0.00057	0.00028	0.0020	J	mg/L	1	9/12/2019 10:56:31 AM	47377
Boron	1.1	0.023	0.20		mg/L	5	9/12/2019 10:58:29 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 10:56:31 AM	47377
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 10:56:31 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 10:56:31 AM	47377
Copper	0.0079	0.0041	0.0060		mg/L	1	9/12/2019 10:56:31 AM	47377
Iron	3.3	0.044	0.10	*	mg/L	5	9/12/2019 10:58:29 AM	47377
Manganese	1.1	0.0014	0.010	*	mg/L	5	9/12/2019 10:58:29 AM	47377
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 10:56:31 AM	47377
Nickel	0.0054	0.0040	0.010	J	mg/L	1	9/12/2019 10:56:31 AM	47377
Silver	0.0089	0.0014	0.0050		mg/L	1	9/12/2019 10:56:31 AM	47377
Zinc	0.0079	0.0058	0.010	J	mg/L	1	9/12/2019 10:56:31 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/19/2019 7:39:13 PM	B63058
Arsenic	0.0011	0.00050	0.0050	J	mg/L	5	9/19/2019 7:39:13 PM	B63058
Lead	ND	0.00027	0.0025		mg/L	5	9/19/2019 7:39:13 PM	B63058
Selenium	0.00092	0.00086	0.0050	J	mg/L	5	9/19/2019 7:39:13 PM	B63058
Thallium	ND	0.00024	0.0025		mg/L	5	9/19/2019 7:39:13 PM	B63058
Uranium	0.058	0.00037	0.0025	*	mg/L	5	9/10/2019 7:01:15 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/10/2019 1:48:19 PM	47301
Arsenic	ND	0.0016	0.0050		mg/L	5	9/10/2019 1:48:19 PM	47301
Lead	0.0032	0.00027	0.0025		mg/L	5	9/10/2019 1:48:19 PM	47301
Selenium	ND	0.0024	0.0050		mg/L	5	9/10/2019 1:48:19 PM	47301
Thallium	ND	0.00026	0.0025		mg/L	5	9/10/2019 1:48:19 PM	47301
Uranium	0.049	0.00042	0.0025	*	mg/L	5	9/10/2019 1:48:19 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000078	0.000038	0.00020	J	mg/L	1	9/13/2019 10:23:11 AM	47460
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	0.35	0.17	1.0	J	µg/L	1	8/27/2019 7:42:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 9:40:00 AM
Lab ID: 1908D66-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1-Methylnaphthalene	0.82	0.31	4.0	J	µg/L	1	8/27/2019 7:42:00 PM	R62438
2-Methylnaphthalene	1.1	0.35	4.0	J	µg/L	1	8/27/2019 7:42:00 PM	R62438
Acetone	ND	1.2	10		µg/L	1	8/27/2019 7:42:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 7:42:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 7:42:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Chloroform	0.60	0.12	1.0	J	µg/L	1	8/27/2019 7:42:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 7:42:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 7:42:00 PM	R62438

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 9:40:00 AM
Lab ID: 1908D66-003
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 7:42:00 PM	R62438
Xylenes, Total	0.70	0.45	1.5	J	µg/L	1	8/27/2019 7:42:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	98.4	0	70-130		%Rec	1	8/27/2019 7:42:00 PM	R62438
Surr: 4-Bromofluorobenzene	96.2	0	70-130		%Rec	1	8/27/2019 7:42:00 PM	R62438
Surr: Dibromofluoromethane	96.6	0	70-130		%Rec	1	8/27/2019 7:42:00 PM	R62438
Surr: Toluene-d8	95.3	0	70-130		%Rec	1	8/27/2019 7:42:00 PM	R62438

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUP-082219-1
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019
Lab ID: 1908D66-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	8/29/2019 2:07:25 AM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/27/2019 11:03:17 PM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 11:03:17 PM	47050
Surr: DNOP	114	0	70-130		%Rec	1	8/27/2019 11:03:17 PM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/27/2019 2:13:18 AM	B62420
Surr: BFB	98.4	0	65.8-143		%Rec	1	8/27/2019 2:13:18 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.086	0.073	0.50	J	mg/L	5	8/23/2019 11:03:32 PM	A62406
Chloride	4800	250	250		mg/L	500	9/9/2019 2:14:34 AM	A62752
Nitrogen, Nitrite (As N)	ND	0.11	2.0		mg/L	20	8/23/2019 11:16:24 PM	A62406
Bromide	2.2	0.089	0.50		mg/L	5	8/23/2019 11:03:32 PM	A62406
Nitrogen, Nitrate (As N)	19	0.025	0.50	*	mg/L	5	8/23/2019 11:03:32 PM	A62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 11:03:32 PM	A62406
Sulfate	550	1.3	10		mg/L	20	8/23/2019 11:16:24 PM	A62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/16/2019 3:23:57 PM	A62967
Barium	0.079	0.00065	0.0020		mg/L	1	9/16/2019 3:23:57 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 3:23:57 PM	A62967
Boron	1.2	0.045	0.40		mg/L	10	9/16/2019 3:26:23 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:23:57 PM	A62967
Calcium	680	0.62	10		mg/L	10	9/16/2019 3:26:23 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 3:23:57 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:23:57 PM	A62967
Copper	0.0081	0.0013	0.0060		mg/L	1	9/16/2019 3:23:57 PM	A62967
Iron	ND	0.0087	0.020		mg/L	1	9/16/2019 3:23:57 PM	A62967
Magnesium	110	0.50	10		mg/L	10	9/16/2019 3:26:23 PM	A62967
Manganese	0.73	0.00029	0.0020	*	mg/L	1	9/16/2019 3:23:57 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 3:23:57 PM	A62967
Nickel	ND	0.0040	0.010		mg/L	1	9/16/2019 3:23:57 PM	A62967
Potassium	4.7	0.16	1.0		mg/L	1	9/16/2019 3:23:57 PM	A62967
Silver	0.0086	0.00094	0.0050		mg/L	1	9/16/2019 3:23:57 PM	A62967
Sodium	2800	21	50		mg/L	50	9/17/2019 11:31:45 AM	C63004
Zinc	0.0051	0.0023	0.010	J	mg/L	1	9/16/2019 3:23:57 PM	A62967

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUP-082219-1
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019
Lab ID: 1908D66-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	5.0	0.025	0.20	*	mg/L	10	9/12/2019 11:39:59 AM	47377
Barium	0.12	0.00065	0.0020		mg/L	1	9/12/2019 11:00:27 AM	47377
Beryllium	0.00070	0.00028	0.0020	J	mg/L	1	9/12/2019 11:00:27 AM	47377
Boron	1.1	0.023	0.20		mg/L	5	9/12/2019 11:02:23 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 11:00:27 AM	47377
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 11:00:27 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 11:00:27 AM	47377
Copper	0.0081	0.0041	0.0060		mg/L	1	9/12/2019 11:00:27 AM	47377
Iron	3.4	0.044	0.10	*	mg/L	5	9/12/2019 11:02:23 AM	47377
Manganese	1.2	0.0014	0.010	*	mg/L	5	9/12/2019 11:02:23 AM	47377
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 11:00:27 AM	47377
Nickel	0.0062	0.0040	0.010	J	mg/L	1	9/12/2019 11:00:27 AM	47377
Silver	0.0088	0.0014	0.0050		mg/L	1	9/12/2019 11:00:27 AM	47377
Zinc	0.0083	0.0058	0.010	J	mg/L	1	9/12/2019 11:00:27 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/19/2019 7:44:29 PM	B63058
Arsenic	0.0010	0.00010	0.0010		mg/L	1	9/9/2019 6:46:59 PM	B62791
Lead	ND	0.00027	0.0025		mg/L	5	9/19/2019 7:44:29 PM	B63058
Selenium	0.0015	0.00017	0.0010		mg/L	1	9/9/2019 6:46:59 PM	B62791
Thallium	ND	0.00024	0.0025		mg/L	5	9/19/2019 7:44:29 PM	B63058
Uranium	0.058	0.00037	0.0025	*	mg/L	5	9/10/2019 7:03:58 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/10/2019 1:50:30 PM	47301
Arsenic	0.0018	0.0016	0.0050	J	mg/L	5	9/10/2019 1:50:30 PM	47301
Lead	0.0035	0.00027	0.0025		mg/L	5	9/10/2019 1:50:30 PM	47301
Selenium	ND	0.0024	0.0050		mg/L	5	9/10/2019 1:50:30 PM	47301
Thallium	ND	0.00026	0.0025		mg/L	5	9/10/2019 1:50:30 PM	47301
Uranium	0.049	0.00042	0.0025	*	mg/L	5	9/10/2019 1:50:30 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	9/13/2019 10:25:27 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Aniline	ND	3.6	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 11:26:22 PM	47062

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PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUP-082219-1
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019
Lab ID: 1908D66-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 11:26:22 PM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 11:26:22 PM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 11:26:22 PM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 11:26:22 PM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 11:26:22 PM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 11:26:22 PM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 11:26:22 PM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 11:26:22 PM	47062
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 11:26:22 PM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 11:26:22 PM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 11:26:22 PM	47062

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUP-082219-1
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019
Lab ID: 1908D66-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 11:26:22 PM	47062
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 11:26:22 PM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 11:26:22 PM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Naphthalene	ND	4.1	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 11:26:22 PM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 11:26:22 PM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 11:26:22 PM	47062
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Phenol	ND	8.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 11:26:22 PM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 11:26:22 PM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 11:26:22 PM	47062
Surr: 2-Fluorophenol	8.37	0	15-101	S	%Rec	1	8/29/2019 11:26:22 PM	47062
Surr: Phenol-d5	29.1	0	15-84.6		%Rec	1	8/29/2019 11:26:22 PM	47062
Surr: 2,4,6-Tribromophenol	6.33	0	27.8-112	S	%Rec	1	8/29/2019 11:26:22 PM	47062
Surr: Nitrobenzene-d5	93.2	0	33-113		%Rec	1	8/29/2019 11:26:22 PM	47062
Surr: 2-Fluorobiphenyl	83.0	0	26.6-107		%Rec	1	8/29/2019 11:26:22 PM	47062
Surr: 4-Terphenyl-d14	84.5	0	18.7-148		%Rec	1	8/29/2019 11:26:22 PM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUP-082219-1
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019
Lab ID: 1908D66-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Acetone	1.2	1.2	10	J	µg/L	1	8/27/2019 8:07:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 8:07:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 8:07:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Chloroform	0.55	0.12	1.0	J	µg/L	1	8/27/2019 8:07:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 8:07:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 8:07:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUP-082219-1
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019
Lab ID: 1908D66-004
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 8:07:00 PM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 8:07:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	98.4	0	70-130		%Rec	1	8/27/2019 8:07:00 PM	R62438
Surr: 4-Bromofluorobenzene	96.1	0	70-130		%Rec	1	8/27/2019 8:07:00 PM	R62438
Surr: Dibromofluoromethane	93.1	0	70-130		%Rec	1	8/27/2019 8:07:00 PM	R62438
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	8/27/2019 8:07:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 8:52:00 AM
Lab ID: 1908D66-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/27/2019 11:52:51 PM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2019 11:52:51 PM	47050
Surr: DNOP	117	0	70-130		%Rec	1	8/27/2019 11:52:51 PM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/27/2019 2:36:20 AM	B62420
Surr: BFB	96.4	0	65.8-143		%Rec	1	8/27/2019 2:36:20 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.073	0.50		mg/L	5	8/23/2019 11:29:16 PM	A62406
Chloride	1500	50	50		mg/L	100	9/9/2019 2:26:58 AM	A62752
Nitrogen, Nitrite (As N)	ND	0.027	0.50		mg/L	5	8/23/2019 11:29:16 PM	A62406
Bromide	0.67	0.089	0.50		mg/L	5	8/23/2019 11:29:16 PM	A62406
Nitrogen, Nitrate (As N)	9.0	0.025	0.50		mg/L	5	8/23/2019 11:29:16 PM	A62406
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 11:29:16 PM	A62406
Sulfate	84	0.33	2.5		mg/L	5	8/23/2019 11:29:16 PM	A62406
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	0.078	0.0025	0.020		mg/L	1	9/16/2019 3:28:40 PM	A62967
Barium	0.22	0.00065	0.0020		mg/L	1	9/16/2019 3:28:40 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 3:28:40 PM	A62967
Boron	1.9	0.023	0.20		mg/L	5	9/16/2019 3:30:46 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:28:40 PM	A62967
Calcium	39	0.062	1.0		mg/L	1	9/16/2019 3:28:40 PM	A62967
Chromium	0.010	0.0015	0.0060		mg/L	1	9/16/2019 3:28:40 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:28:40 PM	A62967
Copper	0.0056	0.0013	0.0060	J	mg/L	1	9/16/2019 3:28:40 PM	A62967
Iron	0.082	0.0087	0.020		mg/L	1	9/16/2019 3:28:40 PM	A62967
Magnesium	3.5	0.050	1.0		mg/L	1	9/16/2019 3:28:40 PM	A62967
Manganese	0.0031	0.00029	0.0020		mg/L	1	9/16/2019 3:28:40 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 3:28:40 PM	A62967
Nickel	0.0040	0.0040	0.010	J	mg/L	1	9/16/2019 3:28:40 PM	A62967
Potassium	2.4	0.16	1.0		mg/L	1	9/16/2019 3:28:40 PM	A62967
Silver	0.0010	0.00094	0.0050	J	mg/L	1	9/16/2019 3:28:40 PM	A62967
Sodium	1100	8.3	20		mg/L	20	9/17/2019 11:33:58 AM	C63004
Zinc	0.0054	0.0023	0.010	J	mg/L	1	9/16/2019 3:28:40 PM	A62967
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	3.6	0.012	0.10	*	mg/L	5	9/12/2019 11:12:39 AM	47377
Barium	0.27	0.00065	0.0020		mg/L	1	9/12/2019 11:10:41 AM	47377
Beryllium	0.00030	0.00028	0.0020	J	mg/L	1	9/12/2019 11:10:41 AM	47377

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 8:52:00 AM
Lab ID: 1908D66-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.9	0.023	0.20		mg/L	5	9/12/2019 11:12:39 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 11:10:41 AM	47377
Chromium	0.012	0.0015	0.0060		mg/L	1	9/12/2019 11:10:41 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 11:10:41 AM	47377
Copper	0.0048	0.0041	0.0060	J	mg/L	1	9/12/2019 11:10:41 AM	47377
Iron	3.9	0.044	0.10	*	mg/L	5	9/12/2019 11:12:39 AM	47377
Manganese	0.083	0.00029	0.0020	*	mg/L	1	9/12/2019 11:10:41 AM	47377
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 11:10:41 AM	47377
Nickel	0.0042	0.0040	0.010	J	mg/L	1	9/12/2019 11:10:41 AM	47377
Silver	ND	0.0014	0.0050		mg/L	1	9/12/2019 11:10:41 AM	47377
Zinc	0.017	0.0058	0.010		mg/L	1	9/12/2019 11:10:41 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00099	0.00039	0.0010	J	mg/L	1	9/9/2019 7:04:05 PM	B62791
Arsenic	0.0036	0.00010	0.0010		mg/L	1	9/9/2019 7:04:05 PM	B62791
Lead	0.00018	0.000055	0.00050	J	mg/L	1	9/9/2019 7:04:05 PM	B62791
Selenium	0.010	0.00017	0.0010		mg/L	1	9/9/2019 7:04:05 PM	B62791
Thallium	ND	0.000048	0.00050		mg/L	1	9/9/2019 7:04:05 PM	B62791
Uranium	0.12	0.00037	0.0025	*	mg/L	5	9/10/2019 7:06:40 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 7:10:12 PM	47301
Arsenic	0.0050	0.00031	0.0010		mg/L	1	9/5/2019 7:10:12 PM	47301
Lead	0.0049	0.000055	0.00050		mg/L	1	9/5/2019 7:10:12 PM	47301
Selenium	0.0095	0.00048	0.0010		mg/L	1	9/5/2019 7:10:12 PM	47301
Thallium	0.000098	0.000052	0.00050	J	mg/L	1	9/5/2019 7:10:12 PM	47301
Uranium	0.12	0.00042	0.0025	*	mg/L	5	9/10/2019 1:52:41 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00010	0.000038	0.00020	J	mg/L	1	9/13/2019 10:27:42 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Aniline	ND	3.6	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Anthracene	ND	2.7	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Azobenzene	ND	3.3	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/29/2019 11:56:35 PM	47062

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 8:52:00 AM
Lab ID: 1908D66-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Benzoic acid	ND	11	20		µg/L	1	8/29/2019 11:56:35 PM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/29/2019 11:56:35 PM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Carbazole	ND	2.9	10		µg/L	1	8/29/2019 11:56:35 PM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	8/29/2019 11:56:35 PM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Chrysene	ND	2.8	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	8/29/2019 11:56:35 PM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/29/2019 11:56:35 PM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/29/2019 11:56:35 PM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/29/2019 11:56:35 PM	47062
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/29/2019 11:56:35 PM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/29/2019 11:56:35 PM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Fluoranthene	ND	2.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Fluorene	ND	2.9	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/29/2019 11:56:35 PM	47062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 8:52:00 AM
Lab ID: 1908D66-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2-Methylphenol	ND	2.9	10		µg/L	1	8/29/2019 11:56:35 PM	47062
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/29/2019 11:56:35 PM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/29/2019 11:56:35 PM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Naphthalene	ND	4.1	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 11:56:35 PM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	8/29/2019 11:56:35 PM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	8/29/2019 11:56:35 PM	47062
Phenanthrene	ND	2.8	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Phenol	ND	8.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Pyrene	ND	2.5	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Pyridine	ND	9.6	10		µg/L	1	8/29/2019 11:56:35 PM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/29/2019 11:56:35 PM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/29/2019 11:56:35 PM	47062
Surr: 2-Fluorophenol	38.3	0	15-101		%Rec	1	8/29/2019 11:56:35 PM	47062
Surr: Phenol-d5	29.1	0	15-84.6		%Rec	1	8/29/2019 11:56:35 PM	47062
Surr: 2,4,6-Tribromophenol	42.1	0	27.8-112		%Rec	1	8/29/2019 11:56:35 PM	47062
Surr: Nitrobenzene-d5	57.1	0	33-113		%Rec	1	8/29/2019 11:56:35 PM	47062
Surr: 2-Fluorobiphenyl	48.4	0	26.6-107		%Rec	1	8/29/2019 11:56:35 PM	47062
Surr: 4-Terphenyl-d14	50.8	0	18.7-148		%Rec	1	8/29/2019 11:56:35 PM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 8:31:00 PM	R62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 8:52:00 AM
Lab ID: 1908D66-005
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Acetone	ND	1.2	10		µg/L	1	8/27/2019 8:31:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 8:31:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 8:31:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 8:31:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 8:31:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 8:52:00 AM
Lab ID: 1908D66-005 **Matrix:** AQUEOUS **Received Date:** 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 8:31:00 PM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 8:31:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	99.0	0	70-130		%Rec	1	8/27/2019 8:31:00 PM	R62438
Surr: 4-Bromofluorobenzene	96.7	0	70-130		%Rec	1	8/27/2019 8:31:00 PM	R62438
Surr: Dibromofluoromethane	97.3	0	70-130		%Rec	1	8/27/2019 8:31:00 PM	R62438
Surr: Toluene-d8	94.3	0	70-130		%Rec	1	8/27/2019 8:31:00 PM	R62438

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 5:10:00 PM
Lab ID: 1908D66-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0032	0.0093		µg/L	1	8/29/2019 2:22:58 AM	47119
NOTES: NO TRIP BLANK ASSOC. W/ WO								
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/28/2019 12:17:41 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 12:17:41 AM	47050
Surr: DNOP	114	0	70-130		%Rec	1	8/28/2019 12:17:41 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.035	0.021	0.050	J	mg/L	1	8/27/2019 2:59:23 AM	B62420
Surr: BFB	94.2	0	65.8-143		%Rec	1	8/27/2019 2:59:23 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Fluoride	0.70	0.073	0.50		mg/L	5	8/23/2019 12:01:08 PM	R62407
Chloride	3400	250	250		mg/L	500	9/9/2019 3:16:37 AM	A62752
Nitrogen, Nitrite (As N)	3.2	0.11	2.0		mg/L	20	8/23/2019 12:13:33 PM	R62407
Bromide	1.6	0.089	0.50		mg/L	5	9/9/2019 3:04:13 AM	A62752
Nitrogen, Nitrate (As N)	2.8	0.025	0.50		mg/L	5	8/23/2019 12:01:08 PM	R62407
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 12:01:08 PM	R62407
Sulfate	770	1.3	10		mg/L	20	8/23/2019 12:13:33 PM	R62407
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/16/2019 3:32:50 PM	A62967
Barium	0.041	0.00065	0.0020		mg/L	1	9/16/2019 3:32:50 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 3:32:50 PM	A62967
Boron	0.58	0.0045	0.040		mg/L	1	9/16/2019 3:32:50 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:32:50 PM	A62967
Calcium	290	0.31	5.0		mg/L	5	9/16/2019 3:35:02 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 3:32:50 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:32:50 PM	A62967
Copper	0.017	0.0013	0.0060		mg/L	1	9/16/2019 3:32:50 PM	A62967
Iron	0.0089	0.0087	0.020	J	mg/L	1	9/16/2019 3:32:50 PM	A62967
Magnesium	50	0.050	1.0		mg/L	1	9/16/2019 3:32:50 PM	A62967
Manganese	0.32	0.00029	0.0020	*	mg/L	1	9/16/2019 3:32:50 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 3:32:50 PM	A62967
Nickel	0.034	0.0040	0.010		mg/L	1	9/16/2019 3:32:50 PM	A62967
Potassium	11	0.16	1.0		mg/L	1	9/16/2019 3:32:50 PM	A62967
Silver	0.0048	0.00094	0.0050	J	mg/L	1	9/16/2019 3:32:50 PM	A62967
Sodium	2300	21	50		mg/L	50	9/17/2019 11:36:08 AM	C63004
Zinc	0.0080	0.0023	0.010	J	mg/L	1	9/16/2019 3:32:50 PM	A62967

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ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 5:10:00 PM
Lab ID: 1908D66-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	2.2	0.012	0.10	*	mg/L	5	9/12/2019 11:16:30 AM	47377
Barium	0.061	0.00065	0.0020		mg/L	1	9/12/2019 11:14:34 AM	47377
Beryllium	ND	0.00028	0.0020		mg/L	1	9/12/2019 11:14:34 AM	47377
Boron	0.57	0.0045	0.040		mg/L	1	9/12/2019 11:14:34 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 11:14:34 AM	47377
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 11:14:34 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 11:14:34 AM	47377
Copper	0.015	0.0041	0.0060		mg/L	1	9/12/2019 11:14:34 AM	47377
Iron	1.1	0.044	0.10	*	mg/L	5	9/12/2019 11:16:30 AM	47377
Manganese	0.58	0.00029	0.0020	*	mg/L	1	9/12/2019 11:14:34 AM	47377
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 11:14:34 AM	47377
Nickel	0.032	0.0040	0.010		mg/L	1	9/12/2019 11:14:34 AM	47377
Silver	0.0044	0.0014	0.0050	J	mg/L	1	9/12/2019 11:14:34 AM	47377
Zinc	ND	0.0058	0.010		mg/L	1	9/12/2019 11:14:34 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00059	0.00039	0.0010	J	mg/L	1	9/9/2019 7:06:47 PM	B62791
Arsenic	0.0011	0.00010	0.0010		mg/L	1	9/9/2019 7:06:47 PM	B62791
Lead	ND	0.00027	0.0025		mg/L	5	9/19/2019 7:49:44 PM	B63058
Selenium	0.0028	0.00017	0.0010		mg/L	1	9/9/2019 7:06:47 PM	B62791
Thallium	ND	0.00024	0.0025		mg/L	5	9/19/2019 7:49:44 PM	B63058
Uranium	0.031	0.00037	0.0025	*	mg/L	5	9/10/2019 7:09:22 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/10/2019 3:13:28 PM	47301
Arsenic	0.0015	0.00031	0.0010		mg/L	1	9/5/2019 7:12:23 PM	47301
Lead	0.0012	0.000055	0.00050		mg/L	1	9/5/2019 7:12:23 PM	47301
Selenium	0.0022	0.00048	0.0010		mg/L	1	9/5/2019 7:12:23 PM	47301
Thallium	0.000058	0.000052	0.00050	J	mg/L	1	9/5/2019 7:12:23 PM	47301
Uranium	0.028	0.00042	0.0025		mg/L	5	9/10/2019 3:13:28 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/13/2019 10:29:57 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Aniline	ND	3.6	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Anthracene	ND	2.7	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Azobenzene	ND	3.3	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/30/2019 12:26:44 AM	47062

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 5:10:00 PM
Lab ID: 1908D66-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Benzoic acid	ND	11	20		µg/L	1	8/30/2019 12:26:44 AM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/30/2019 12:26:44 AM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Carbazole	ND	2.9	10		µg/L	1	8/30/2019 12:26:44 AM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	8/30/2019 12:26:44 AM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Chrysene	ND	2.8	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	8/30/2019 12:26:44 AM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/30/2019 12:26:44 AM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/30/2019 12:26:44 AM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/30/2019 12:26:44 AM	47062
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/30/2019 12:26:44 AM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/30/2019 12:26:44 AM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Fluoranthene	ND	2.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Fluorene	ND	2.9	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/30/2019 12:26:44 AM	47062

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 5:10:00 PM
Lab ID: 1908D66-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Isophorone	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2-Methylphenol	ND	2.9	10		µg/L	1	8/30/2019 12:26:44 AM	47062
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/30/2019 12:26:44 AM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/30/2019 12:26:44 AM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Naphthalene	ND	4.1	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	8/30/2019 12:26:44 AM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	8/30/2019 12:26:44 AM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	8/30/2019 12:26:44 AM	47062
Phenanthrene	ND	2.8	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Phenol	ND	8.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Pyrene	ND	2.5	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Pyridine	ND	9.6	10		µg/L	1	8/30/2019 12:26:44 AM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/30/2019 12:26:44 AM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/30/2019 12:26:44 AM	47062
Surr: 2-Fluorophenol	24.3	0	15-101		%Rec	1	8/30/2019 12:26:44 AM	47062
Surr: Phenol-d5	40.4	0	15-84.6		%Rec	1	8/30/2019 12:26:44 AM	47062
Surr: 2,4,6-Tribromophenol	33.0	0	27.8-112		%Rec	1	8/30/2019 12:26:44 AM	47062
Surr: Nitrobenzene-d5	82.5	0	33-113		%Rec	1	8/30/2019 12:26:44 AM	47062
Surr: 2-Fluorobiphenyl	78.1	0	26.6-107		%Rec	1	8/30/2019 12:26:44 AM	47062
Surr: 4-Terphenyl-d14	81.4	0	18.7-148		%Rec	1	8/30/2019 12:26:44 AM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	9.7	0.17	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Methyl tert-butyl ether (MTBE)	24	0.46	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 5:10:00 PM
Lab ID: 1908D66-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Acetone	2.2	1.2	10	J	µg/L	1	8/27/2019 8:56:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 8:56:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 8:56:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,1-Dichloroethane	1.6	0.14	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,1-Dichloroethene	0.47	0.21	1.0	J	µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 8:56:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 8:56:00 PM	R62438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 5:10:00 PM
Lab ID: 1908D66-006
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 8:56:00 PM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 8:56:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	96.6	0	70-130		%Rec	1	8/27/2019 8:56:00 PM	R62438
Surr: 4-Bromofluorobenzene	96.0	0	70-130		%Rec	1	8/27/2019 8:56:00 PM	R62438
Surr: Dibromofluoromethane	96.3	0	70-130		%Rec	1	8/27/2019 8:56:00 PM	R62438
Surr: Toluene-d8	98.3	0	70-130		%Rec	1	8/27/2019 8:56:00 PM	R62438

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 4:20:00 PM
Lab ID: 1908D66-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	0.35	1.0		mg/L	1	8/28/2019 12:42:28 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 12:42:28 AM	47050
Surr: DNOP	117	0	70-130		%Rec	1	8/28/2019 12:42:28 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	8/27/2019 3:22:28 AM	B62420
Surr: BFB	93.6	0	65.8-143		%Rec	1	8/27/2019 3:22:28 AM	B62420
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Fluoride	1.2	0.073	0.50		mg/L	5	8/23/2019 11:36:19 AM	R62407
Chloride	470	25	25		mg/L	50	9/9/2019 3:41:26 AM	A62752
Nitrogen, Nitrite (As N)	0.49	0.027	0.50	J	mg/L	5	8/23/2019 11:36:19 AM	R62407
Bromide	2.1	0.089	0.50		mg/L	5	9/9/2019 3:29:01 AM	A62752
Nitrogen, Nitrate (As N)	0.91	0.025	0.50		mg/L	5	8/23/2019 11:36:19 AM	R62407
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 11:36:19 AM	R62407
Sulfate	180	0.33	2.5		mg/L	5	8/23/2019 11:36:19 AM	R62407
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/16/2019 3:37:18 PM	A62967
Barium	0.052	0.00065	0.0020		mg/L	1	9/16/2019 3:37:18 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 3:37:18 PM	A62967
Boron	1.9	0.023	0.20		mg/L	5	9/16/2019 3:39:23 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:37:18 PM	A62967
Calcium	43	0.062	1.0		mg/L	1	9/16/2019 3:37:18 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 3:37:18 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:37:18 PM	A62967
Copper	0.0045	0.0013	0.0060	J	mg/L	1	9/16/2019 3:37:18 PM	A62967
Iron	ND	0.0087	0.020		mg/L	1	9/16/2019 3:37:18 PM	A62967
Magnesium	8.1	0.050	1.0		mg/L	1	9/16/2019 3:37:18 PM	A62967
Manganese	0.023	0.00029	0.0020		mg/L	1	9/16/2019 3:37:18 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 3:37:18 PM	A62967
Nickel	0.0066	0.0040	0.010	J	mg/L	1	9/16/2019 3:37:18 PM	A62967
Potassium	1.8	0.16	1.0		mg/L	1	9/16/2019 3:37:18 PM	A62967
Silver	0.0011	0.00094	0.0050	J	mg/L	1	9/16/2019 3:37:18 PM	A62967
Sodium	600	4.2	10		mg/L	10	9/17/2019 11:38:14 AM	C63004
Zinc	0.0051	0.0023	0.010	J	mg/L	1	9/16/2019 3:37:18 PM	A62967
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	1.2	0.012	0.10	*	mg/L	5	9/12/2019 11:20:16 AM	47377
Barium	0.065	0.00065	0.0020		mg/L	1	9/12/2019 11:18:29 AM	47377
Beryllium	ND	0.00028	0.0020		mg/L	1	9/12/2019 11:18:29 AM	47377

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 4:20:00 PM
Lab ID: 1908D66-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	1.9	0.023	0.20		mg/L	5	9/12/2019 11:20:16 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 11:18:29 AM	47377
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 11:18:29 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 11:18:29 AM	47377
Copper	ND	0.0041	0.0060		mg/L	1	9/12/2019 11:18:29 AM	47377
Iron	0.79	0.0087	0.020	*	mg/L	1	9/12/2019 11:18:29 AM	47377
Manganese	0.074	0.00029	0.0020	*	mg/L	1	9/12/2019 11:18:29 AM	47377
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 11:18:29 AM	47377
Nickel	0.0046	0.0040	0.010	J	mg/L	1	9/12/2019 11:18:29 AM	47377
Silver	ND	0.0014	0.0050		mg/L	1	9/12/2019 11:18:29 AM	47377
Zinc	ND	0.0058	0.010		mg/L	1	9/12/2019 11:18:29 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 7:09:28 PM	B62791
Arsenic	0.0011	0.00010	0.0010		mg/L	1	9/9/2019 7:09:28 PM	B62791
Lead	ND	0.000055	0.00050		mg/L	1	9/9/2019 7:09:28 PM	B62791
Selenium	0.0010	0.00017	0.0010		mg/L	1	9/9/2019 7:09:28 PM	B62791
Thallium	ND	0.000048	0.00050		mg/L	1	9/9/2019 7:09:28 PM	B62791
Uranium	0.12	0.00075	0.0050	*	mg/L	10	9/12/2019 8:11:32 PM	B62885
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 7:14:33 PM	47301
Arsenic	0.0014	0.00031	0.0010		mg/L	1	9/5/2019 7:14:33 PM	47301
Lead	0.00099	0.000055	0.00050		mg/L	1	9/5/2019 7:14:33 PM	47301
Selenium	0.00059	0.00048	0.0010	J	mg/L	1	9/5/2019 7:14:33 PM	47301
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 7:14:33 PM	47301
Uranium	0.13	0.00085	0.0050	*	mg/L	10	9/10/2019 3:56:25 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/13/2019 10:36:52 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Aniline	ND	3.6	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Anthracene	ND	2.7	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Azobenzene	ND	3.3	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Benzo(a)pyrene	ND	3.5	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	8/30/2019 12:56:57 AM	47062

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 4:20:00 PM
Lab ID: 1908D66-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Benzoic acid	ND	11	20		µg/L	1	8/30/2019 12:56:57 AM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	8/30/2019 12:56:57 AM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Carbazole	ND	2.9	10		µg/L	1	8/30/2019 12:56:57 AM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	8/30/2019 12:56:57 AM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Chrysene	ND	2.8	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	8/30/2019 12:56:57 AM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	8/30/2019 12:56:57 AM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	8/30/2019 12:56:57 AM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	8/30/2019 12:56:57 AM	47062
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	8/30/2019 12:56:57 AM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	8/30/2019 12:56:57 AM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Fluoranthene	ND	2.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Fluorene	ND	2.9	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	8/30/2019 12:56:57 AM	47062

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Qualifiers:

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D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 4:20:00 PM
Lab ID: 1908D66-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
1-Methylnaphthalene	ND	3.1	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2-Methylnaphthalene	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2-Methylphenol	ND	2.9	10		µg/L	1	8/30/2019 12:56:57 AM	47062
3+4-Methylphenol	ND	3.6	10		µg/L	1	8/30/2019 12:56:57 AM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	8/30/2019 12:56:57 AM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Naphthalene	ND	4.1	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	8/30/2019 12:56:57 AM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	8/30/2019 12:56:57 AM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	8/30/2019 12:56:57 AM	47062
Phenanthrene	ND	2.8	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Phenol	ND	8.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Pyrene	ND	2.5	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Pyridine	ND	9.6	10		µg/L	1	8/30/2019 12:56:57 AM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	8/30/2019 12:56:57 AM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	8/30/2019 12:56:57 AM	47062
Surr: 2-Fluorophenol	55.6	0	15-101		%Rec	1	8/30/2019 12:56:57 AM	47062
Surr: Phenol-d5	41.3	0	15-84.6		%Rec	1	8/30/2019 12:56:57 AM	47062
Surr: 2,4,6-Tribromophenol	59.6	0	27.8-112		%Rec	1	8/30/2019 12:56:57 AM	47062
Surr: Nitrobenzene-d5	81.0	0	33-113		%Rec	1	8/30/2019 12:56:57 AM	47062
Surr: 2-Fluorobiphenyl	65.4	0	26.6-107		%Rec	1	8/30/2019 12:56:57 AM	47062
Surr: 4-Terphenyl-d14	75.0	0	18.7-148		%Rec	1	8/30/2019 12:56:57 AM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Toluene	ND	0.35	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Methyl tert-butyl ether (MTBE)	4.5	0.46	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Naphthalene	ND	0.28	2.0		µg/L	1	8/27/2019 9:20:00 PM	R62438

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 4:20:00 PM
Lab ID: 1908D66-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	ND	0.31	4.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Acetone	ND	1.2	10		µg/L	1	8/27/2019 9:20:00 PM	R62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Bromoform	ND	0.29	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
2-Butanone	ND	2.1	10		µg/L	1	8/27/2019 9:20:00 PM	R62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/27/2019 9:20:00 PM	R62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Chlorobenzene	ND	0.19	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Chloroform	ND	0.12	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
2-Hexanone	ND	1.5	10		µg/L	1	8/27/2019 9:20:00 PM	R62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/27/2019 9:20:00 PM	R62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 4:20:00 PM
Lab ID: 1908D66-007
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Styrene	ND	0.19	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/27/2019 9:20:00 PM	R62438
Xylenes, Total	ND	0.45	1.5		µg/L	1	8/27/2019 9:20:00 PM	R62438
Surr: 1,2-Dichloroethane-d4	98.7	0	70-130		%Rec	1	8/27/2019 9:20:00 PM	R62438
Surr: 4-Bromofluorobenzene	96.1	0	70-130		%Rec	1	8/27/2019 9:20:00 PM	R62438
Surr: Dibromofluoromethane	97.4	0	70-130		%Rec	1	8/27/2019 9:20:00 PM	R62438
Surr: Toluene-d8	94.8	0	70-130		%Rec	1	8/27/2019 9:20:00 PM	R62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:05:00 PM
Lab ID: 1908D66-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	1.4	0.35	1.0		mg/L	1	8/28/2019 1:07:23 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 1:07:23 AM	47050
Surr: DNOP	113	0	70-130		%Rec	1	8/28/2019 1:07:23 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	35	1.1	2.5		mg/L	50	8/27/2019 4:34:29 PM	W6244
Surr: BFB	115	0	65.8-143		%Rec	50	8/27/2019 4:34:29 PM	W6244
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Fluoride	1.3	0.073	0.50		mg/L	5	8/23/2019 10:21:52 AM	R62407
Chloride	620	25	25		mg/L	50	9/9/2019 4:06:15 AM	A62752
Nitrogen, Nitrite (As N)	0.57	0.027	0.50		mg/L	5	8/23/2019 10:21:52 AM	R62407
Bromide	1.1	0.089	0.50		mg/L	5	9/9/2019 3:53:51 AM	A62752
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 10:21:52 AM	R62407
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 10:21:52 AM	R62407
Sulfate	1.8	0.33	2.5	J	mg/L	5	8/23/2019 10:21:52 AM	R62407
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/16/2019 3:41:22 PM	A62967
Barium	1.8	0.0032	0.010		mg/L	5	9/16/2019 3:43:18 PM	A62967
Beryllium	ND	0.00028	0.0020		mg/L	1	9/16/2019 3:41:22 PM	A62967
Boron	0.64	0.0045	0.040		mg/L	1	9/16/2019 3:41:22 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:41:22 PM	A62967
Calcium	95	0.062	1.0		mg/L	1	9/16/2019 3:41:22 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 3:41:22 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:41:22 PM	A62967
Copper	0.0025	0.0013	0.0060	J	mg/L	1	9/16/2019 3:41:22 PM	A62967
Iron	3.4	0.044	0.10	*	mg/L	5	9/16/2019 3:43:18 PM	A62967
Magnesium	26	0.050	1.0		mg/L	1	9/16/2019 3:41:22 PM	A62967
Manganese	2.0	0.0014	0.010	*	mg/L	5	9/16/2019 3:43:18 PM	A62967
Molybdenum	0.0092	0.0067	0.0080		mg/L	1	9/16/2019 3:41:22 PM	A62967
Nickel	0.042	0.0040	0.010		mg/L	1	9/16/2019 3:41:22 PM	A62967
Potassium	0.65	0.16	1.0	J	mg/L	1	9/16/2019 3:41:22 PM	A62967
Silver	0.0015	0.00094	0.0050	J	mg/L	1	9/16/2019 3:41:22 PM	A62967
Sodium	630	4.2	10		mg/L	10	9/17/2019 11:40:11 AM	C63004
Zinc	0.0077	0.0023	0.010	J	mg/L	1	9/16/2019 3:41:22 PM	A62967
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.66	0.0025	0.020	*	mg/L	1	9/12/2019 11:22:12 AM	47377
Barium	1.8	0.0032	0.010		mg/L	5	9/12/2019 11:24:02 AM	47377
Beryllium	ND	0.00028	0.0020		mg/L	1	9/12/2019 11:22:12 AM	47377

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:05:00 PM
Lab ID: 1908D66-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.62	0.0045	0.040		mg/L	1	9/12/2019 11:22:12 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 11:22:12 AM	47377
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 11:22:12 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 11:22:12 AM	47377
Copper	ND	0.0041	0.0060		mg/L	1	9/12/2019 11:22:12 AM	47377
Iron	3.9	0.044	0.10	*	mg/L	5	9/12/2019 11:24:02 AM	47377
Manganese	1.9	0.0014	0.010	*	mg/L	5	9/12/2019 11:24:02 AM	47377
Molybdenum	0.011	0.0067	0.0080		mg/L	1	9/12/2019 11:22:12 AM	47377
Nickel	0.039	0.0040	0.010		mg/L	1	9/12/2019 11:22:12 AM	47377
Silver	ND	0.0014	0.0050		mg/L	1	9/12/2019 11:22:12 AM	47377
Zinc	ND	0.0058	0.010		mg/L	1	9/12/2019 11:22:12 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/9/2019 7:12:10 PM	B62791
Arsenic	0.020	0.00010	0.0010	*	mg/L	1	9/9/2019 7:12:10 PM	B62791
Lead	ND	0.000055	0.00050		mg/L	1	9/9/2019 7:12:10 PM	B62791
Selenium	0.00039	0.00017	0.0010	J	mg/L	1	9/9/2019 7:12:10 PM	B62791
Thallium	ND	0.000048	0.00050		mg/L	1	9/9/2019 7:12:10 PM	B62791
Uranium	0.0042	0.000075	0.00050		mg/L	1	9/10/2019 7:14:47 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.00039	0.0010		mg/L	1	9/5/2019 7:16:44 PM	47301
Arsenic	0.020	0.00031	0.0010	*	mg/L	1	9/5/2019 7:16:44 PM	47301
Lead	0.00054	0.000055	0.00050		mg/L	1	9/5/2019 7:16:44 PM	47301
Selenium	0.00059	0.00048	0.0010	J	mg/L	1	9/5/2019 7:16:44 PM	47301
Thallium	ND	0.000052	0.00050		mg/L	1	9/5/2019 7:16:44 PM	47301
Uranium	0.0040	0.000085	0.00050		mg/L	1	9/5/2019 7:16:44 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	9/13/2019 10:39:09 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Aniline	ND	3.6	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Anthracene	ND	2.7	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Azobenzene	ND	3.3	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Benzo(a)pyrene	ND	3.5	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	9/3/2019 1:37:15 PM	47062

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:05:00 PM
Lab ID: 1908D66-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Benzoic acid	ND	11	20		µg/L	1	9/3/2019 1:37:15 PM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	9/3/2019 1:37:15 PM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Carbazole	ND	2.9	10		µg/L	1	9/3/2019 1:37:15 PM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	9/3/2019 1:37:15 PM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Chrysene	ND	2.8	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	9/3/2019 1:37:15 PM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	9/3/2019 1:37:15 PM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	9/3/2019 1:37:15 PM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	9/3/2019 1:37:15 PM	47062
2,4-Dimethylphenol	6.1	3.0	10	J	µg/L	1	9/3/2019 1:37:15 PM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	9/3/2019 1:37:15 PM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	9/3/2019 1:37:15 PM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Fluoranthene	ND	2.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Fluorene	ND	2.9	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	9/3/2019 1:37:15 PM	47062

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:05:00 PM
Lab ID: 1908D66-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
1-Methylnaphthalene	9.8	3.1	10	J	µg/L	1	9/3/2019 1:37:15 PM	47062
2-Methylnaphthalene	7.3	3.0	10	J	µg/L	1	9/3/2019 1:37:15 PM	47062
2-Methylphenol	31	2.9	10		µg/L	1	9/3/2019 1:37:15 PM	47062
3+4-Methylphenol	24	3.6	10		µg/L	1	9/3/2019 1:37:15 PM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	9/3/2019 1:37:15 PM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Naphthalene	36	4.1	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	9/3/2019 1:37:15 PM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	9/3/2019 1:37:15 PM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	9/3/2019 1:37:15 PM	47062
Phenanthrene	ND	2.8	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Phenol	23	8.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Pyrene	ND	2.5	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Pyridine	ND	9.6	10		µg/L	1	9/3/2019 1:37:15 PM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	9/3/2019 1:37:15 PM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	9/3/2019 1:37:15 PM	47062
Surr: 2-Fluorophenol	35.1	0	15-101		%Rec	1	9/3/2019 1:37:15 PM	47062
Surr: Phenol-d5	27.0	0	15-84.6		%Rec	1	9/3/2019 1:37:15 PM	47062
Surr: 2,4,6-Tribromophenol	49.2	0	27.8-112		%Rec	1	9/3/2019 1:37:15 PM	47062
Surr: Nitrobenzene-d5	58.8	0	33-113		%Rec	1	9/3/2019 1:37:15 PM	47062
Surr: 2-Fluorobiphenyl	55.7	0	26.6-107		%Rec	1	9/3/2019 1:37:15 PM	47062
Surr: 4-Terphenyl-d14	67.6	0	18.7-148		%Rec	1	9/3/2019 1:37:15 PM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	9100	17	100		µg/L	100	8/27/2019 11:21:00 PM	B62438
Toluene	1400	35	100		µg/L	100	8/27/2019 11:21:00 PM	B62438
Ethylbenzene	670	1.3	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Methyl tert-butyl ether (MTBE)	28	4.6	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2,4-Trimethylbenzene	270	2.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,3,5-Trimethylbenzene	44	1.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2-Dibromoethane (EDB)	ND	1.7	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Naphthalene	50	2.8	20		µg/L	10	8/27/2019 11:45:00 PM	B62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:05:00 PM
Lab ID: 1908D66-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	15	3.1	40	J	µg/L	10	8/27/2019 11:45:00 PM	B62438
2-Methylnaphthalene	17	3.5	40	J	µg/L	10	8/27/2019 11:45:00 PM	B62438
Acetone	ND	12	100		µg/L	10	8/27/2019 11:45:00 PM	B62438
Bromobenzene	ND	2.4	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Bromodichloromethane	ND	1.3	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Bromoform	ND	2.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Bromomethane	ND	2.7	30		µg/L	10	8/27/2019 11:45:00 PM	B62438
2-Butanone	ND	21	100		µg/L	10	8/27/2019 11:45:00 PM	B62438
Carbon disulfide	ND	4.5	100		µg/L	10	8/27/2019 11:45:00 PM	B62438
Carbon Tetrachloride	ND	1.4	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Chlorobenzene	ND	1.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Chloroethane	23	1.8	20		µg/L	10	8/27/2019 11:45:00 PM	B62438
Chloroform	ND	1.2	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Chloromethane	ND	3.2	30		µg/L	10	8/27/2019 11:45:00 PM	B62438
2-Chlorotoluene	ND	2.5	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
4-Chlorotoluene	ND	2.3	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
cis-1,2-DCE	6.9	1.9	10	J	µg/L	10	8/27/2019 11:45:00 PM	B62438
cis-1,3-Dichloropropene	ND	1.4	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2-Dibromo-3-chloropropane	ND	3.3	20		µg/L	10	8/27/2019 11:45:00 PM	B62438
Dibromochloromethane	ND	2.4	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Dibromomethane	ND	2.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2-Dichlorobenzene	ND	3.0	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,3-Dichlorobenzene	ND	2.5	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,1-Dichloroethane	39	1.4	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,1-Dichloroethene	ND	2.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2-Dichloropropane	ND	2.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,3-Dichloropropane	ND	2.0	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
2,2-Dichloropropane	ND	2.3	20		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Hexachlorobutadiene	ND	3.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
2-Hexanone	ND	15	100		µg/L	10	8/27/2019 11:45:00 PM	B62438
Isopropylbenzene	21	1.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
4-Isopropyltoluene	4.2	2.2	10	J	µg/L	10	8/27/2019 11:45:00 PM	B62438
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	8/27/2019 11:45:00 PM	B62438
Methylene Chloride	ND	1.5	30		µg/L	10	8/27/2019 11:45:00 PM	B62438
n-Butylbenzene	13	2.3	30	J	µg/L	10	8/27/2019 11:45:00 PM	B62438
n-Propylbenzene	47	2.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:05:00 PM
Lab ID: 1908D66-008
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	8.2	2.5	10	J	µg/L	10	8/27/2019 11:45:00 PM	B62438
Styrene	ND	1.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
tert-Butylbenzene	ND	2.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,1,1,2-Tetrachloroethane	ND	2.1	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,1,2,2-Tetrachloroethane	ND	5.5	20		µg/L	10	8/27/2019 11:45:00 PM	B62438
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
trans-1,3-Dichloropropene	ND	1.7	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2,3-Trichlorobenzene	ND	3.0	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2,4-Trichlorobenzene	ND	2.0	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,1,1-Trichloroethane	ND	1.7	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,1,2-Trichloroethane	ND	2.2	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Trichloroethene (TCE)	ND	1.7	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Trichlorofluoromethane	ND	1.9	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
1,2,3-Trichloropropane	ND	3.0	20		µg/L	10	8/27/2019 11:45:00 PM	B62438
Vinyl chloride	28	1.8	10		µg/L	10	8/27/2019 11:45:00 PM	B62438
Xylenes, Total	1700	4.5	15		µg/L	10	8/27/2019 11:45:00 PM	B62438
Surr: 1,2-Dichloroethane-d4	95.7	0	70-130		%Rec	10	8/27/2019 11:45:00 PM	B62438
Surr: 4-Bromofluorobenzene	98.1	0	70-130		%Rec	10	8/27/2019 11:45:00 PM	B62438
Surr: Dibromofluoromethane	92.4	0	70-130		%Rec	10	8/27/2019 11:45:00 PM	B62438
Surr: Toluene-d8	99.3	0	70-130		%Rec	10	8/27/2019 11:45:00 PM	B62438

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:55:00 PM
Lab ID: 1908D66-011
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **BRM**	
Diesel Range Organics (DRO)	5.1	0.35	1.0		mg/L	1	8/28/2019 12:18:07 AM	47050
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2019 12:18:07 AM	47050
Surr: DNOP	103	0	70-130		%Rec	1	8/28/2019 12:18:07 AM	47050
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	28	1.1	2.5		mg/L	50	8/27/2019 5:43:44 PM	W6244
Surr: BFB	111	0	65.8-143		%Rec	50	8/27/2019 5:43:44 PM	W6244
EPA METHOD 300.0: ANIONS							Analyst: **CAS**	
Fluoride	ND	0.073	0.50		mg/L	5	8/23/2019 10:46:41 AM	R62407
Chloride	3300	100	100		mg/L	200	9/9/2019 4:31:04 AM	A62752
Nitrogen, Nitrite (As N)	3.3	0.11	2.0		mg/L	20	8/23/2019 10:59:06 AM	R62407
Bromide	3.9	0.089	0.50		mg/L	5	9/9/2019 4:18:40 AM	A62752
Nitrogen, Nitrate (As N)	ND	0.025	0.50		mg/L	5	8/23/2019 10:46:41 AM	R62407
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	8/23/2019 10:46:41 AM	R62407
Sulfate	2.8	0.33	2.5		mg/L	5	8/23/2019 10:46:41 AM	R62407
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Aluminum	ND	0.0025	0.020		mg/L	1	9/16/2019 3:53:40 PM	A62967
Barium	22	0.032	0.10	*	mg/L	50	9/16/2019 3:57:40 PM	A62967
Beryllium	0.00043	0.00028	0.0020	J	mg/L	1	9/16/2019 3:53:40 PM	A62967
Boron	1.0	0.023	0.20		mg/L	5	9/16/2019 3:55:44 PM	A62967
Cadmium	ND	0.00055	0.0020		mg/L	1	9/16/2019 3:53:40 PM	A62967
Calcium	610	3.1	50		mg/L	50	9/16/2019 3:57:40 PM	A62967
Chromium	ND	0.0015	0.0060		mg/L	1	9/16/2019 3:53:40 PM	A62967
Cobalt	ND	0.0031	0.0060		mg/L	1	9/16/2019 3:53:40 PM	A62967
Copper	0.014	0.0013	0.0060		mg/L	1	9/16/2019 3:53:40 PM	A62967
Iron	20	0.44	1.0	*	mg/L	50	9/16/2019 3:57:40 PM	A62967
Magnesium	170	0.25	5.0		mg/L	5	9/16/2019 3:55:44 PM	A62967
Manganese	8.1	0.014	0.10	*	mg/L	50	9/16/2019 3:57:40 PM	A62967
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/16/2019 3:53:40 PM	A62967
Nickel	0.090	0.0040	0.010		mg/L	1	9/16/2019 3:53:40 PM	A62967
Potassium	6.4	0.16	1.0		mg/L	1	9/16/2019 3:53:40 PM	A62967
Silver	0.0068	0.00094	0.0050		mg/L	1	9/16/2019 3:53:40 PM	A62967
Sodium	1400	21	50		mg/L	50	9/16/2019 3:57:40 PM	A62967
Zinc	0.021	0.0023	0.010		mg/L	1	9/16/2019 3:53:40 PM	A62967
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Aluminum	0.027	0.0025	0.020		mg/L	1	9/12/2019 11:25:50 AM	47377
Barium	21	0.032	0.10	*	mg/L	50	9/12/2019 11:42:07 AM	47377
Beryllium	0.00061	0.00028	0.0020	J	mg/L	1	9/12/2019 11:25:50 AM	47377

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Qualifiers:

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H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:55:00 PM
Lab ID: 1908D66-011
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS							Analyst: **bcv**	
Boron	0.99	0.023	0.20		mg/L	5	9/12/2019 11:27:41 AM	47377
Cadmium	ND	0.00074	0.0020		mg/L	1	9/12/2019 11:25:50 AM	47377
Chromium	ND	0.0015	0.0060		mg/L	1	9/12/2019 11:25:50 AM	47377
Cobalt	ND	0.0031	0.0060		mg/L	1	9/12/2019 11:25:50 AM	47377
Copper	0.016	0.0041	0.0060		mg/L	1	9/12/2019 11:25:50 AM	47377
Iron	19	0.44	1.0	*	mg/L	50	9/12/2019 11:42:07 AM	47377
Manganese	7.5	0.014	0.10	*	mg/L	50	9/12/2019 11:42:07 AM	47377
Molybdenum	ND	0.0067	0.0080		mg/L	1	9/12/2019 11:25:50 AM	47377
Nickel	0.089	0.0040	0.010		mg/L	1	9/12/2019 11:25:50 AM	47377
Silver	0.0070	0.0014	0.0050		mg/L	1	9/12/2019 11:25:50 AM	47377
Zinc	0.020	0.0058	0.010		mg/L	1	9/12/2019 11:25:50 AM	47377
EPA 200.8: DISSOLVED METALS							Analyst: **pmf**	
Antimony	0.00049	0.00039	0.0010	J	mg/L	1	9/9/2019 7:14:52 PM	B62791
Arsenic	0.020	0.00010	0.0010	*	mg/L	1	9/9/2019 7:14:52 PM	B62791
Lead	0.0030	0.00027	0.0025		mg/L	5	9/10/2019 7:17:29 PM	B62810
Selenium	0.0013	0.00017	0.0010		mg/L	1	9/9/2019 7:14:52 PM	B62791
Thallium	ND	0.00024	0.0025		mg/L	5	9/10/2019 7:17:29 PM	B62810
Uranium	0.0027	0.00037	0.0025		mg/L	5	9/10/2019 7:17:29 PM	B62810
EPA 200.8: METALS							Analyst: **pmf**	
Antimony	ND	0.0019	0.0050		mg/L	5	9/10/2019 3:22:12 PM	47301
Arsenic	0.020	0.00031	0.0010	*	mg/L	1	9/5/2019 7:18:54 PM	47301
Lead	0.0037	0.00027	0.0025		mg/L	5	9/10/2019 3:22:12 PM	47301
Selenium	0.0012	0.00048	0.0010		mg/L	1	9/5/2019 7:18:54 PM	47301
Thallium	ND	0.00026	0.0025		mg/L	5	9/10/2019 3:22:12 PM	47301
Uranium	0.0023	0.00042	0.0025	J	mg/L	5	9/10/2019 3:22:12 PM	47301
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/13/2019 10:41:28 AM	47460
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Acenaphthylene	ND	2.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Aniline	ND	3.6	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Anthracene	ND	2.7	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Azobenzene	ND	3.3	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Benz(a)anthracene	ND	3.6	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Benzo(a)pyrene	ND	3.5	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Benzo(b)fluoranthene	ND	3.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Benzo(g,h,i)perylene	ND	2.2	10		µg/L	1	9/13/2019 8:00:15 PM	47062

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:55:00 PM
Lab ID: 1908D66-011
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Benzo(k)fluoranthene	ND	2.9	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Benzoic acid	ND	11	20		µg/L	1	9/13/2019 8:00:15 PM	47062
Benzyl alcohol	ND	2.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Bis(2-chloroethoxy)methane	ND	2.6	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Bis(2-chloroethyl)ether	ND	3.2	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Bis(2-ethylhexyl)phthalate	ND	4.3	10		µg/L	1	9/13/2019 8:00:15 PM	47062
4-Bromophenyl phenyl ether	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Butyl benzyl phthalate	ND	3.3	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Carbazole	ND	2.9	10		µg/L	1	9/13/2019 8:00:15 PM	47062
4-Chloro-3-methylphenol	ND	3.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
4-Chloroaniline	ND	2.3	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2-Chloronaphthalene	ND	3.1	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2-Chlorophenol	ND	2.7	10		µg/L	1	9/13/2019 8:00:15 PM	47062
4-Chlorophenyl phenyl ether	ND	2.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Chrysene	ND	2.8	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Di-n-butyl phthalate	ND	2.7	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Di-n-octyl phthalate	ND	3.5	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Dibenz(a,h)anthracene	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Dibenzofuran	ND	3.2	10		µg/L	1	9/13/2019 8:00:15 PM	47062
1,2-Dichlorobenzene	ND	4.8	10		µg/L	1	9/13/2019 8:00:15 PM	47062
1,3-Dichlorobenzene	ND	5.3	10		µg/L	1	9/13/2019 8:00:15 PM	47062
1,4-Dichlorobenzene	ND	4.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
3,3´-Dichlorobenzidine	ND	2.8	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Diethyl phthalate	ND	2.9	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Dimethyl phthalate	ND	3.2	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2,4-Dichlorophenol	ND	2.9	20		µg/L	1	9/13/2019 8:00:15 PM	47062
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
4,6-Dinitro-2-methylphenol	ND	2.9	20		µg/L	1	9/13/2019 8:00:15 PM	47062
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	9/13/2019 8:00:15 PM	47062
2,4-Dinitrotoluene	ND	3.8	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2,6-Dinitrotoluene	ND	2.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Fluoranthene	ND	2.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Fluorene	ND	2.9	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Hexachlorobenzene	ND	3.1	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Hexachlorobutadiene	ND	4.7	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Hexachlorocyclopentadiene	ND	3.6	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Hexachloroethane	ND	4.8	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Indeno(1,2,3-cd)pyrene	ND	2.7	10		µg/L	1	9/13/2019 8:00:15 PM	47062

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:55:00 PM
Lab ID: 1908D66-011
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Isophorone	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
1-Methylnaphthalene	ND	3.1	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2-Methylnaphthalene	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2-Methylphenol	ND	2.9	10		µg/L	1	9/13/2019 8:00:15 PM	47062
3+4-Methylphenol	ND	3.6	10		µg/L	1	9/13/2019 8:00:15 PM	47062
N-Nitrosodi-n-propylamine	ND	6.5	10		µg/L	1	9/13/2019 8:00:15 PM	47062
N-Nitrosodimethylamine	ND	5.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
N-Nitrosodiphenylamine	ND	2.4	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Naphthalene	ND	4.1	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2-Nitroaniline	ND	3.2	10		µg/L	1	9/13/2019 8:00:15 PM	47062
3-Nitroaniline	ND	3.2	10		µg/L	1	9/13/2019 8:00:15 PM	47062
4-Nitroaniline	ND	2.7	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Nitrobenzene	ND	2.8	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2-Nitrophenol	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
4-Nitrophenol	ND	7.6	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Pentachlorophenol	ND	2.7	20		µg/L	1	9/13/2019 8:00:15 PM	47062
Phenanthrene	ND	2.8	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Phenol	ND	8.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Pyrene	ND	2.5	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Pyridine	ND	9.6	10		µg/L	1	9/13/2019 8:00:15 PM	47062
1,2,4-Trichlorobenzene	ND	4.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2,4,5-Trichlorophenol	ND	3.0	10		µg/L	1	9/13/2019 8:00:15 PM	47062
2,4,6-Trichlorophenol	ND	2.3	10		µg/L	1	9/13/2019 8:00:15 PM	47062
Surr: 2-Fluorophenol	40.6	0	15-101		%Rec	1	9/13/2019 8:00:15 PM	47062
Surr: Phenol-d5	28.8	0	15-84.6		%Rec	1	9/13/2019 8:00:15 PM	47062
Surr: 2,4,6-Tribromophenol	42.6	0	27.8-112		%Rec	1	9/13/2019 8:00:15 PM	47062
Surr: Nitrobenzene-d5	56.9	0	33-113		%Rec	1	9/13/2019 8:00:15 PM	47062
Surr: 2-Fluorobiphenyl	49.9	0	26.6-107		%Rec	1	9/13/2019 8:00:15 PM	47062
Surr: 4-Terphenyl-d14	51.3	0	18.7-148		%Rec	1	9/13/2019 8:00:15 PM	47062
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	4800	17	100		µg/L	100	8/28/2019 12:09:00 AM	B62438
Toluene	9.0	3.5	10	J	µg/L	10	8/28/2019 12:33:00 AM	B62438
Ethylbenzene	1100	13	100		µg/L	100	8/28/2019 12:09:00 AM	B62438
Methyl tert-butyl ether (MTBE)	35	4.6	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2,4-Trimethylbenzene	1100	21	100		µg/L	100	8/28/2019 12:09:00 AM	B62438
1,3,5-Trimethylbenzene	200	1.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2-Dibromoethane (EDB)	ND	1.7	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Naphthalene	290	2.8	20		µg/L	10	8/28/2019 12:33:00 AM	B62438

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PQL	Practical Quanitative Limit	RL	Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:55:00 PM
Lab ID: 1908D66-011
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1-Methylnaphthalene	55	3.1	40		µg/L	10	8/28/2019 12:33:00 AM	B62438
2-Methylnaphthalene	62	3.5	40		µg/L	10	8/28/2019 12:33:00 AM	B62438
Acetone	ND	12	100		µg/L	10	8/28/2019 12:33:00 AM	B62438
Bromobenzene	ND	2.4	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Bromodichloromethane	ND	1.3	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Bromoform	ND	2.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Bromomethane	ND	2.7	30		µg/L	10	8/28/2019 12:33:00 AM	B62438
2-Butanone	92	21	100	J	µg/L	10	8/28/2019 12:33:00 AM	B62438
Carbon disulfide	ND	4.5	100		µg/L	10	8/28/2019 12:33:00 AM	B62438
Carbon Tetrachloride	ND	1.4	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Chlorobenzene	ND	1.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Chloroethane	ND	1.8	20		µg/L	10	8/28/2019 12:33:00 AM	B62438
Chloroform	ND	1.2	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Chloromethane	ND	3.2	30		µg/L	10	8/28/2019 12:33:00 AM	B62438
2-Chlorotoluene	ND	2.5	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
4-Chlorotoluene	ND	2.3	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
cis-1,2-DCE	ND	1.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
cis-1,3-Dichloropropene	ND	1.4	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2-Dibromo-3-chloropropane	ND	3.3	20		µg/L	10	8/28/2019 12:33:00 AM	B62438
Dibromochloromethane	ND	2.4	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Dibromomethane	ND	2.1	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2-Dichlorobenzene	ND	3.0	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,3-Dichlorobenzene	ND	2.5	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,1-Dichloroethane	ND	1.4	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,1-Dichloroethene	ND	2.1	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2-Dichloropropane	ND	2.1	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,3-Dichloropropane	ND	2.0	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
2,2-Dichloropropane	ND	2.3	20		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Hexachlorobutadiene	ND	3.1	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
2-Hexanone	ND	15	100		µg/L	10	8/28/2019 12:33:00 AM	B62438
Isopropylbenzene	9.3	1.9	10	J	µg/L	10	8/28/2019 12:33:00 AM	B62438
4-Isopropyltoluene	4.9	2.2	10	J	µg/L	10	8/28/2019 12:33:00 AM	B62438
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	8/28/2019 12:33:00 AM	B62438
Methylene Chloride	ND	1.5	30		µg/L	10	8/28/2019 12:33:00 AM	B62438
n-Butylbenzene	13	2.3	30	J	µg/L	10	8/28/2019 12:33:00 AM	B62438
n-Propylbenzene	17	2.1	10		µg/L	10	8/28/2019 12:33:00 AM	B62438

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-20
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/21/2019 2:55:00 PM
Lab ID: 1908D66-011
Matrix: AQUEOUS
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
sec-Butylbenzene	4.0	2.5	10	J	µg/L	10	8/28/2019 12:33:00 AM	B62438
Styrene	ND	1.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
tert-Butylbenzene	ND	2.1	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,1,1,2-Tetrachloroethane	ND	2.1	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,1,2,2-Tetrachloroethane	ND	5.5	20		µg/L	10	8/28/2019 12:33:00 AM	B62438
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
trans-1,3-Dichloropropene	ND	1.7	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2,3-Trichlorobenzene	ND	3.0	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2,4-Trichlorobenzene	ND	2.0	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,1,1-Trichloroethane	ND	1.7	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,1,2-Trichloroethane	ND	2.2	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Trichloroethene (TCE)	ND	1.7	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Trichlorofluoromethane	ND	1.9	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
1,2,3-Trichloropropane	ND	3.0	20		µg/L	10	8/28/2019 12:33:00 AM	B62438
Vinyl chloride	ND	1.8	10		µg/L	10	8/28/2019 12:33:00 AM	B62438
Xylenes, Total	3700	45	150		µg/L	100	8/28/2019 12:09:00 AM	B62438
Surr: 1,2-Dichloroethane-d4	92.5	0	70-130		%Rec	10	8/28/2019 12:33:00 AM	B62438
Surr: 4-Bromofluorobenzene	97.7	0	70-130		%Rec	10	8/28/2019 12:33:00 AM	B62438
Surr: Dibromofluoromethane	91.4	0	70-130		%Rec	10	8/28/2019 12:33:00 AM	B62438
Surr: Toluene-d8	96.1	0	70-130		%Rec	10	8/28/2019 12:33:00 AM	B62438

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:30:00 PM
Lab ID: 1908D66-012
Matrix: TRIP BLANK
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
Benzene	0.37	0.17	1.0	J	µg/L	1	8/28/2019 12:57:00 AM	B62438
Toluene	0.53	0.35	1.0	J	µg/L	1	8/28/2019 12:57:00 AM	B62438
Ethylbenzene	ND	0.13	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2,4-Trimethylbenzene	ND	0.21	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,3,5-Trimethylbenzene	ND	0.19	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2-Dibromoethane (EDB)	ND	0.17	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Naphthalene	0.63	0.28	2.0	J	µg/L	1	8/28/2019 12:57:00 AM	B62438
1-Methylnaphthalene	0.78	0.31	4.0	J	µg/L	1	8/28/2019 12:57:00 AM	B62438
2-Methylnaphthalene	1.0	0.35	4.0	J	µg/L	1	8/28/2019 12:57:00 AM	B62438
Acetone	ND	1.2	10		µg/L	1	8/28/2019 12:57:00 AM	B62438
Bromobenzene	ND	0.24	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Bromodichloromethane	ND	0.13	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Bromoform	ND	0.29	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Bromomethane	ND	0.27	3.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
2-Butanone	ND	2.1	10		µg/L	1	8/28/2019 12:57:00 AM	B62438
Carbon disulfide	ND	0.45	10		µg/L	1	8/28/2019 12:57:00 AM	B62438
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Chlorobenzene	0.64	0.19	1.0	J	µg/L	1	8/28/2019 12:57:00 AM	B62438
Chloroethane	ND	0.18	2.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Chloroform	ND	0.12	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Chloromethane	ND	0.32	3.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
4-Chlorotoluene	ND	0.23	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
cis-1,2-DCE	ND	0.19	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
cis-1,3-Dichloropropene	ND	0.14	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2-Dibromo-3-chloropropane	ND	0.33	2.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Dibromomethane	ND	0.21	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2-Dichlorobenzene	ND	0.30	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,3-Dichlorobenzene	ND	0.25	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,1-Dichloroethane	ND	0.14	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,1-Dichloroethene	ND	0.21	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2-Dichloropropane	ND	0.21	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,3-Dichloropropane	ND	0.20	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	8/28/2019 12:57:00 AM	B62438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2019 Annual 3rd Qtr GW Sampling
Collection Date: 8/22/2019 12:30:00 PM
Lab ID: 1908D66-012
Matrix: TRIP BLANK
Received Date: 8/22/2019 4:23:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Hexachlorobutadiene	ND	0.31	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
2-Hexanone	ND	1.5	10		µg/L	1	8/28/2019 12:57:00 AM	B62438
Isopropylbenzene	ND	0.19	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
4-Isopropyltoluene	ND	0.22	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	8/28/2019 12:57:00 AM	B62438
Methylene Chloride	ND	0.15	3.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
n-Butylbenzene	ND	0.23	3.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
n-Propylbenzene	ND	0.21	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
sec-Butylbenzene	ND	0.25	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Styrene	ND	0.19	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
tert-Butylbenzene	ND	0.21	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,1,1,2-Tetrachloroethane	ND	0.21	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,1,2,2-Tetrachloroethane	ND	0.55	2.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
trans-1,3-Dichloropropene	ND	0.17	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2,3-Trichlorobenzene	ND	0.30	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2,4-Trichlorobenzene	ND	0.20	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,1,1-Trichloroethane	ND	0.17	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,1,2-Trichloroethane	ND	0.22	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Trichloroethene (TCE)	ND	0.17	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Trichlorofluoromethane	ND	0.19	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
1,2,3-Trichloropropane	ND	0.30	2.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Vinyl chloride	ND	0.18	1.0		µg/L	1	8/28/2019 12:57:00 AM	B62438
Xylenes, Total	0.68	0.45	1.5	J	µg/L	1	8/28/2019 12:57:00 AM	B62438
Surr: 1,2-Dichloroethane-d4	97.0	0	70-130		%Rec	1	8/28/2019 12:57:00 AM	B62438
Surr: 4-Bromofluorobenzene	96.5	0	70-130		%Rec	1	8/28/2019 12:57:00 AM	B62438
Surr: Dibromofluoromethane	96.3	0	70-130		%Rec	1	8/28/2019 12:57:00 AM	B62438
Surr: Toluene-d8	96.5	0	70-130		%Rec	1	8/28/2019 12:57:00 AM	B62438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A62874**	RunNo: **62874**
Prep Date:	Analysis Date: **9/12/2019**	SeqNo: **2142356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A62874**	RunNo: **62874**
Prep Date:	Analysis Date: **9/12/2019**	SeqNo: **2142357** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.011	0.020	0.01000	0	111	50	150			J
Barium	0.0018	0.0020	0.002000	0	89.4	50	150			J
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Boron	0.039	0.040	0.04000	0	96.6	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	95.9	50	150			J
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Cobalt	0.0064	0.0060	0.006000	0	106	50	150			
Copper	0.0070	0.0060	0.006000	0	117	50	150			
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.0	50	150			J
Molybdenum	0.0088	0.0080	0.008000	0	109	50	150			
Nickel	0.0043	0.010	0.005000	0	86.7	50	150			J
Silver	0.0049	0.0050	0.005000	0	97.8	50	150			J
Zinc	0.010	0.010	0.01000	0	101	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62874**	RunNo: **62874**
Prep Date:	Analysis Date: **9/12/2019**	SeqNo: **2142358** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A62874**	RunNo: **62874**
Prep Date:	Analysis Date: **9/12/2019**	SeqNo: **2142358** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.51	0.020	0.5000	0	101	85	115			
Barium	0.45	0.0020	0.5000	0	89.2	85	115			
Beryllium	0.45	0.0020	0.5000	0	90.0	85	115			
Boron	0.47	0.040	0.5000	0	93.5	85	115			
Cadmium	0.46	0.0020	0.5000	0	91.9	85	115			
Chromium	0.45	0.0060	0.5000	0	89.6	85	115			
Cobalt	0.44	0.0060	0.5000	0	88.1	85	115			
Copper	0.46	0.0060	0.5000	0	91.3	85	115			
Iron	0.46	0.020	0.5000	0	92.2	85	115			
Manganese	0.44	0.0020	0.5000	0	88.9	85	115			
Molybdenum	0.45	0.0080	0.5000	0	90.4	85	115			
Nickel	0.44	0.010	0.5000	0	88.8	85	115			
Silver	0.096	0.0050	0.1000	0	95.6	85	115			
Zinc	0.45	0.010	0.5000	0	89.4	85	115			

Sample ID: **MB-47377**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **47377**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID: **LLLCS-47377**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47377**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**

02-Oct-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **LLLCS-47377**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **47377**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.012	0.020	0.01000	0	120	50	150			J
Barium	0.0019	0.0020	0.002000	0	93.2	50	150			J
Beryllium	0.0022	0.0020	0.002000	0	110	50	150			
Boron	0.039	0.040	0.04000	0	97.1	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	93.1	50	150			J
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Cobalt	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0062	0.0060	0.006000	0	104	50	150			
Iron	0.023	0.020	0.02000	0	115	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.6	50	150			J
Molybdenum	0.0085	0.0080	0.008000	0	106	50	150			
Nickel	0.0040	0.010	0.005000	0	80.9	50	150			J
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Zinc	0.011	0.010	0.01000	0	109	50	150			

Sample ID: **LCS-47377**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **47377**	RunNo: **62874**
Prep Date: **9/10/2019**	Analysis Date: **9/12/2019**	SeqNo: **2142409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	111	85	115			
Barium	0.48	0.0020	0.5000	0	96.8	85	115			
Beryllium	0.50	0.0020	0.5000	0	99.6	85	115			
Boron	0.50	0.040	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.6	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Cobalt	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.9	85	115			
Nickel	0.48	0.010	0.5000	0	96.6	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	97.6	85	115			

Sample ID: **1908D66-001GMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **EB-3**	Batch ID: **A62874**	RunNo: **62874**
Prep Date:	Analysis Date: **9/12/2019**	SeqNo: **2142445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **1908D66-001GMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **EB-3** Batch ID: **A62874** RunNo: **62874**
Prep Date: Analysis Date: **9/12/2019** SeqNo: **2142445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	70	130			
Barium	0.50	0.0020	0.5000	0	99.3	70	130			
Beryllium	0.51	0.0020	0.5000	0	103	70	130			
Boron	0.53	0.040	0.5000	0.01105	103	70	130			
Cadmium	0.53	0.0020	0.5000	0	106	70	130			
Chromium	0.51	0.0060	0.5000	0	101	70	130			
Cobalt	0.51	0.0060	0.5000	0	102	70	130			
Copper	0.49	0.0060	0.5000	0	98.0	70	130			
Iron	0.48	0.020	0.5000	0	96.6	70	130			
Manganese	0.50	0.0020	0.5000	0	100	70	130			
Molybdenum	0.49	0.0080	0.5000	0	97.2	70	130			
Nickel	0.50	0.010	0.5000	0	100	70	130			
Silver	0.10	0.0050	0.1000	0	100	70	130			
Zinc	0.53	0.010	0.5000	0	105	70	130			

Sample ID: **1908D66-001GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **EB-3** Batch ID: **A62874** RunNo: **62874**
Prep Date: Analysis Date: **9/12/2019** SeqNo: **2142446** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	70	130	0.679	20	
Barium	0.51	0.0020	0.5000	0	101	70	130	1.77	20	
Beryllium	0.52	0.0020	0.5000	0	105	70	130	2.00	20	
Boron	0.52	0.040	0.5000	0.01105	102	70	130	0.534	20	
Cadmium	0.53	0.0020	0.5000	0	107	70	130	1.01	20	
Chromium	0.51	0.0060	0.5000	0	103	70	130	1.71	20	
Cobalt	0.52	0.0060	0.5000	0	104	70	130	1.62	20	
Copper	0.50	0.0060	0.5000	0	99.2	70	130	1.23	20	
Iron	0.49	0.020	0.5000	0	98.4	70	130	1.84	20	
Manganese	0.51	0.0020	0.5000	0	103	70	130	2.19	20	
Molybdenum	0.49	0.0080	0.5000	0	97.7	70	130	0.571	20	
Nickel	0.51	0.010	0.5000	0	102	70	130	1.24	20	
Silver	0.10	0.0050	0.1000	0	102	70	130	1.46	20	
Zinc	0.54	0.010	0.5000	0	108	70	130	2.04	20	

Sample ID: **1908D66-002GMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-10** Batch ID: **47377** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **1908D66-002GMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-10** Batch ID: **47377** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.50	0.0020	0.5000	0	100	70	130			
Cadmium	0.51	0.0020	0.5000	0	102	70	130			
Chromium	0.49	0.0060	0.5000	0	97.3	70	130			
Cobalt	0.48	0.0060	0.5000	0	95.6	70	130			
Copper	0.52	0.0060	0.5000	0	104	70	130			
Molybdenum	0.48	0.0080	0.5000	0	95.8	70	130			
Nickel	0.49	0.010	0.5000	0.01500	94.1	70	130			
Silver	0.11	0.0050	0.1000	0.003170	102	70	130			
Zinc	0.49	0.010	0.5000	0	98.5	70	130			

Sample ID: **1908D66-002GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-10** Batch ID: **47377** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142452** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.50	0.0020	0.5000	0	101	70	130	0.591	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0.177	20	
Chromium	0.49	0.0060	0.5000	0	97.3	70	130	0.0616	20	
Cobalt	0.48	0.0060	0.5000	0	95.7	70	130	0.106	20	
Copper	0.52	0.0060	0.5000	0	104	70	130	0.159	20	
Molybdenum	0.48	0.0080	0.5000	0	95.7	70	130	0.143	20	
Nickel	0.48	0.010	0.5000	0.01500	93.9	70	130	0.236	20	
Silver	0.10	0.0050	0.1000	0.003170	102	70	130	0.355	20	
Zinc	0.49	0.010	0.5000	0	98.0	70	130	0.476	20	

Sample ID: **1908D66-002GMS** SampType: **MS** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-10** Batch ID: **47377** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142454** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.99	0.20	0.5000	0.5079	96.7	70	130			

Sample ID: **1908D66-002GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-10** Batch ID: **47377** RunNo: **62874**
Prep Date: **9/10/2019** Analysis Date: **9/12/2019** SeqNo: **2142455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.99	0.20	0.5000	0.5079	96.4	70	130	0.140	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**

02-Oct-19

Client: MARATHON GALLUP

Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **1908D66-002GMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-10**	Batch ID: **47377**	RunNo: **62943**
Prep Date: **9/10/2019**	Analysis Date: **9/14/2019**	SeqNo: **2145688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	2.0	0.10	0.5000	0.8372	229	70	130			S

Sample ID: **1908D66-002GMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Metals**
Client ID: **MKTF-10**	Batch ID: **47377**	RunNo: **62943**
Prep Date: **9/10/2019**	Analysis Date: **9/14/2019**	SeqNo: **2145689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	2.0	0.10	0.5000	0.8372	235	70	130	1.63	20	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146091** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0064	0.020	0.01000	0	64.2	50	150			J
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Beryllium	0.0021	0.0020	0.002000	0	103	50	150			
Boron	0.039	0.040	0.04000	0	98.7	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Calcium	0.50	1.0	0.5000	0	100	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.9	50	150			J
Cobalt	0.0066	0.0060	0.006000	0	109	50	150			
Copper	0.0056	0.0060	0.006000	0	93.4	50	150			J
Iron	0.017	0.020	0.02000	0	84.4	50	150			J
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	97.9	50	150			J
Molybdenum	0.0081	0.0080	0.008000	0	101	50	150			
Nickel	0.0067	0.010	0.005000	0	133	50	150			J
Potassium	0.36	1.0	0.5000	0	72.1	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0049	0.0050	0.005000	0	98.9	50	150			J
Sodium	0.46	1.0	0.5000	0	92.9	50	150			J
Zinc	0.011	0.010	0.01000	0	105	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	107	85	115			
Barium	0.48	0.0020	0.5000	0	95.2	85	115			
Beryllium	0.49	0.0020	0.5000	0	97.8	85	115			
Boron	0.50	0.040	0.5000	0	99.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.7	85	115			
Calcium	50	1.0	50.00	0	99.1	85	115			
Chromium	0.49	0.0060	0.5000	0	97.1	85	115			
Cobalt	0.47	0.0060	0.5000	0	94.3	85	115			
Copper	0.50	0.0060	0.5000	0	99.1	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Magnesium	50	1.0	50.00	0	99.0	85	115			
Manganese	0.48	0.0020	0.5000	0	96.9	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.6	85	115			
Nickel	0.48	0.010	0.5000	0	95.1	85	115			
Potassium	49	1.0	50.00	0	97.7	85	115			
Silver	0.10	0.0050	0.1000	0	99.5	85	115			
Sodium	50	1.0	50.00	0	99.4	85	115			
Zinc	0.48	0.010	0.5000	0	96.8	85	115			

Sample ID: **1908D66-001FMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB-3**	Batch ID: **A62967**	RunNo: **62967**
Prep Date:	Analysis Date: **9/16/2019**	SeqNo: **2146180** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	107	70	130			
Barium	0.48	0.0020	0.5000	0	96.3	70	130			
Beryllium	0.52	0.0020	0.5000	0	104	70	130			
Boron	0.51	0.040	0.5000	0.009835	101	70	130			
Cadmium	0.52	0.0020	0.5000	0	104	70	130			
Calcium	51	1.0	50.00	0	101	70	130			
Chromium	0.50	0.0060	0.5000	0	99.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **1908D66-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB-3** Batch ID: **A62967** RunNo: **62967**
Prep Date: Analysis Date: **9/16/2019** SeqNo: **2146180** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.51	0.0060	0.5000	0	102	70	130			
Copper	0.49	0.0060	0.5000	0	98.7	70	130			
Iron	0.49	0.020	0.5000	0	97.5	70	130			
Magnesium	49	1.0	50.00	0	97.6	70	130			
Manganese	0.50	0.0020	0.5000	0	101	70	130			
Molybdenum	0.48	0.0080	0.5000	0	95.0	70	130			
Nickel	0.49	0.010	0.5000	0	97.7	70	130			
Potassium	48	1.0	50.00	0	96.1	70	130			
Silver	0.097	0.0050	0.1000	0	96.6	70	130			
Sodium	50	1.0	50.00	0	100	70	130			
Zinc	0.52	0.010	0.5000	0.005145	103	70	130			

Sample ID: **1908D66-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB-3** Batch ID: **A62967** RunNo: **62967**
Prep Date: Analysis Date: **9/16/2019** SeqNo: **2146181** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	106	70	130	0.854	20	
Barium	0.49	0.0020	0.5000	0	98.4	70	130	2.20	20	
Beryllium	0.52	0.0020	0.5000	0	104	70	130	0.177	20	
Boron	0.52	0.040	0.5000	0.009835	103	70	130	1.69	20	
Cadmium	0.53	0.0020	0.5000	0	106	70	130	1.89	20	
Calcium	50	1.0	50.00	0	100	70	130	0.548	20	
Chromium	0.51	0.0060	0.5000	0	102	70	130	2.16	20	
Cobalt	0.52	0.0060	0.5000	0	104	70	130	1.71	20	
Copper	0.49	0.0060	0.5000	0	98.5	70	130	0.238	20	
Iron	0.49	0.020	0.5000	0	97.6	70	130	0.0447	20	
Magnesium	48	1.0	50.00	0	96.8	70	130	0.919	20	
Manganese	0.50	0.0020	0.5000	0	101	70	130	0.236	20	
Molybdenum	0.49	0.0080	0.5000	0	97.7	70	130	2.76	20	
Nickel	0.50	0.010	0.5000	0	100	70	130	2.67	20	
Potassium	48	1.0	50.00	0	95.1	70	130	1.12	20	
Silver	0.098	0.0050	0.1000	0	97.8	70	130	1.30	20	
Sodium	50	1.0	50.00	0	100	70	130	0.211	20	
Zinc	0.54	0.010	0.5000	0.005145	106	70	130	3.16	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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WO#: **1908D66**
02-Oct-19

Client: MARATHON GALLUP
Project: 2019 Annual 3rd Qtr GW Sampling

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C63004**	RunNo: **63004**
Prep Date:	Analysis Date: **9/17/2019**	SeqNo: **2148083** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C63004**	RunNo: **63004**
Prep Date:	Analysis Date: **9/17/2019**	SeqNo: **2148084** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.54	1.0	0.5000	0	108	50	150			J

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C63004**	RunNo: **63004**
Prep Date:	Analysis Date: **9/17/2019**	SeqNo: **2148085** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	98.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit