Western Refining Southwest LLC
I-40 Exit 39
Jamestown, NM 87347
A subsidiary of Marathon Petroleum Corporation

March 25, 2021

Mr. Kevin Pierard, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505

RE: Approval with Modifications
Disapproval Facility Wide Ground Water Monitoring Work Plan – Updates for 2020
Western Refining Southwest LLC, Gallup Refinery
EPA ID #NMD000333211
HWB-WRG-20-012

Dear Mr. Pierard,

Attached please find the response to the comments contained in the New Mexico Environment Department (NMED) Approval with Modifications Facility Wide Ground Water Monitoring Plan – Updates for 2020.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore of my staff at 505-879-7643.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction of supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
Marathon Petroleum Company LP, Gallup Refinery

Robert S. Hanks
Refinery General Manager

Enclosure

cc: D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
C. Chavez OCD
L. King, EPA Region 6
G. McCartney, Marathon Petroleum Company
K. Luka, Marathon Petroleum Company
J. Moore, Marathon Gallup Refinery
H. Jones, Trihydro Corporation

Response to Comments

Printed on March 25, 2021

New Mexico Environment Department to Marathon Petroleum Company Comment Letter "Approval with Modifications Disapproval Facility Wide Groundwater Water Monitoring Work Plan – Updates for 2020" (February 16, 2021)

New Mexico Environment Department (NMED) Comment	Marathon Petroleum Company (MPC) Response
Comment 1:	**Response 1:**
The response to NMED's *Disapproval* Comment 5 states, "SPH will enter the well and depress the water table as the SPH tries to equilibrate with the SPH head in the soil column outside the monitoring well," and "[t]he actual thickness of the SPH in the soil column may only be a few inches, but due to mobility of the SPH, the thickness in the monitoring well may be several feet." Note that the mobility of SPH is much less than that of groundwater and a fluctuation of the groundwater elevation may significantly affect observed SPH thickness in a well. NMED agrees that observed SPH measurements may not accurately reflect site conditions. The Permittee only discusses the condition when the observed SPH thickness overestimates SPH thickness in the surrounding formation; however, does not discuss the condition when observed SPH thickness underestimates SPH thickness in the surrounding formation. For example, if the screened intervals of some pertinent wells are submerged below the water table and SPH thickness may be underestimated at these locations. Discuss conditions when observed SPH thickness can be underestimated in the surrounding formation in the revised Work Plan and provide replacement pages.	Section 2.4.1.1 has been revised to state: SPH can be underestimated when the monitoring well screen is submerged in the groundwater. Under these conditions, because of the overlying groundwater head conditions, SPH will remain within the formation and is essentially trapped SPH. It will not possess enough mobility to enter a monitoring well with a submerged screen. These conditions also indicate that SPH is not mobile within the surrounding formation and thus cannot migrate laterally. In this case the use of the term "underestimated" may not be appropriate because the hydraulic head conditions with the formation dictate the movement of any SPH into a well screen. The replacement pages have been included in Attachment A.
Comment 2:	**Response 2:**
The response to NMED's *Disapproval* Comment 11 states, "[a] reference section has been added to the revised report and individual footnotes have been removed." The reference section is appropriately added to the Work Plan; however, the Table of Contents is not updated to include the reference section. Include the reference section in the Table of Contents and provide replacement pages.	The Table of Contents has been revised to include the reference section. The replacement pages have been included in Attachment A.

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Comment 3:	Response 3:
The response to NMED's *Disapproval* Comment 17 states, "[t]he referenced chromium exceedance was an incorrect entry and the actual result for chromium is <0.006 mg/L." Provide the laboratory report that shows the result of the chromium analysis for well NAPIS-2. In addition, although the response provides clarification for the direction provided by Comment 12 of NMED's *Approval with Modifications Annual Ground Water Monitoring Report Gallup Refinery – 2018*, dated January 22, 2020, it does not address other comments that directed revisions to the monitoring program. To clarify, NMED's *Disapproval* Comment 17 states, "[r]eference all relevant NMED's comments that directed revisions to the monitoring program and provide a discussion in the revised Work Plan,"; therefore, the Permittee must reference NMED's relevant comments that directed revisions to the monitoring program. The following are some examples. a) Comment 6 in NMED's *Disapproval Natural Attenuation and Proposed Workplan for the Hydrocarbon Seep Area*, dated January 26, 2021, states, "[p]ropose to conduct sulfide analysis for pertinent wells in the next groundwater monitoring plan updated." Address this comment in the 2020 Work Plan. b) NMED's *Approval Hydrocarbon Seep Interim Measures 2020 First Quarter Status Report, and Hydrocarbon Seep Interim Measures 2020 Second Quarter Status Report*, dated November 23, 2020, states, "the frequency of the water level measurements must be increased to biquarterly in order to evaluate potential effects of idling operations." NMED's *Approval Hydrocarbon Seep Interim Measures 2020 Third Quarter Status Report*, dated December 11, 2020, subsequently approved proposed monthly gauging for all relevant wells. Since the gauging frequency will	The chromium analytical laboratory report for well NAPIS-2 is included in Attachment B. Additions to the 2020 groundwater monitoring program were requested by NMED in the following letters: • NMED's *Approval Hydrocarbon Seep Interim Measures 2020 First Quarter Status Report, and Hydrocarbon Seep Interim Measures 2020 Second Quarter Status Report* (November 23, 2020) • *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019* (November 23, 2020) • *Approval Hydrocarbon Seep Interim Measures 2020 Third Quarter Status Report* (December 11, 2020) • *Disapproval Natural Attenuation and Proposed Workplan for the Hydrocarbon Seep Area* 2020 (January 26, 2021) These comments were submitted by NMED in November and December 2020 and January 2021 after most of the 2020 field activities had been completed. Because the 2020 calendar year has passed by the time the comments were received, the revisions are not relevant to work completed 2020. As requested by NMED, MPC will incorporate these comments into the 2021 work plan and will implement these changes in 2021.

New Mexico Environment Department to Marathon Petroleum Company Comment Letter "Approval with Modifications Disapproval Facility Wide Groundwater Water Monitoring Work Plan – Updates for 2020" (February 16, 2021)

be increased in 2020, it is appropriate to update the monitoring frequency in the 2020 Work Plan. c) Comment 13 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "propose to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for the samples collected from the West LDU in the 2021 Facility-wide Groundwater Monitoring Work Plan." Although Comment 7 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan. d) Comment 13 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "propose to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for wells OW-50 and OW-52 in the 2021 Facility-wide Groundwater Monitoring Work Plan." Although Comment 13 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan. e) Comment 22 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "propose to conduct 1,4-dioxane analysis using EPA Method 8270 SIM and 1,2-dibromoethane (EDB) using EPA Method 8011 for groundwater samples collected from well OW-11 in the 2021 Facility-wide Groundwater Monitoring Work Plan." Although Comment 22 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.	

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f) Comment 25 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "[p]ropose to conduct pesticide analysis for the water samples collected from pond EP-2 using EPA Method 8081in the 2021 Facility-wide Groundwater Monitoring Work Plan." Although Comment 25 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan. g) Comment 26 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery -2019*, dated November 23, 2020, states, "[p]ropose to discontinue pesticide analysis for the samples collected from ponds EP-3, EP-12A, and EP-12B in the 2020 Facility-wide Groundwater Monitoring Work Plan." Although Comment 26 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan. h) Comment 30 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "[p]ropose to conduct PFAS analysis for the groundwater samples collected from OW-63 in the 2021 Facility-wide Groundwater Monitoring Work Plan." Although Comment 30 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan. i) Comment 52 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "[t]he Permittee must continue to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for groundwater sample collected from well SMW-4. Propose to continue the	

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analysis in the 2021 Facility-wide Groundwater Monitoring Work Plan…" Although Comment 52 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan. j) Comment 52 in NMED's *Disapproval Annual Groundwater Monitoring Report Gallup Refinery – 2019*, dated November 23, 2020, states, "[t]he Permittee must continue to conduct 1,4-dioxane analysis using EPA Method 8270 SIM for groundwater sample collected from well SMW-4. Propose to continue the analysis in the 2021 Facility-wide Groundwater Monitoring Work Plan." Although Comment 52 directed the Permittee to address the comment in the 2021 Work Plan, this direction must be addressed in the 2020 Work Plan because the 2020 Work Plan requires other revisions and submittal of a revised Work Plan.	

Attachment A – Revised Facility Wide Groundwater Monitoring Work Plan – Updates for 2020

Printed on March 25, 2021

11 AOCs (AOC 16, 17, 18, 24, 26, 27, 28, 29, 30, 31, and 34) being removed from the Permit and transferred to the Consent Order for further evaluation.

2.4 Summary of contaminant releases that could contribute to possible ground water contamination.

Spills and leaks are known to have occurred on the site in various locations. Although most hydrocarbons are immediately picked up for recovery and contaminated soil is removed, some of the liquids present in a spill may enter the subsurface. With precipitation, there is the possibility that some of the contaminants could leach and reach ground water.

2.4.1 Separate Phase Hydrocarbons

Separate phase hydrocarbons (SPH) have been found in multiple locations within the refinery. These locations include the Main Tank Farm, Hydrocarbon Seep Area, Aeration Basin, French Drain, Truck Loading Rack, and NAPIS Unit areas.

2.4.1.1 Main Tank Farm

Separate phase hydrocarbons (SPH) floating on shallow ground water was found in the mid-1990s at the northeast end of the facility in the main tank farm. A series of recovery wells were installed and SPH has been recovered since the initial discovery. Recovery through hand-bailing was conducted on a quarterly basis and in 2019 recovery pumps were installed. In March 2019, MPC proposed an interim recovery system using pumps in RW-1, RW-2, RW-5, RW-6, OW-14, OW-58, OW-30, and OW-55. The interim system was proposed to recover SPH and dissolved-phase impacts within and down-gradient of the main tank farm. The *Interim Groundwater Recovery System Work Plan* was approved with modifications on August 6, 2019.

Observed SPH measurements may potentially under or overestimate SPH thicknesses in the soil. SPH can be underestimated when the monitoring well screen is submerged in the groundwater. Under these conditions, because of the overlying groundwater head conditions, SPH will remain within the formation and is essentially trapped SPH. It will not possess enough mobility to enter a monitoring well with a submerged screen. These conditions also indicate that SPH is not mobile

within the surrounding formation and thus cannot migrate laterally. In this case the use of the term "underestimated" may not be appropriate because the hydraulic head conditions with the formation dictate the movement of any SPH into a well screen.

SPH can be overestimated when SPH enters the well and depresses the water table as the SPH tries to equilibrate with the SPH head in the soil column outside the monitoring well. Therefore, if the SPH is not floating on the water table and is, instead, perched in a more permeable layer above the water table, the SPH in the monitoring well will appear to be thicker than the SPH in the surrounding soils. In other words, the SPH will flow into the well, and as long as there is sufficient SPH and pressure head, the SPH will rise within the well to the level of the perched SPH. It may also depress the water table within the monitoring well. The actual thickness of the SPH in the soil column may only be a few inches, but due to the mobility of the SPH, the thickness in the monitoring well may be several feet. Recovery wells in the main tank farm and the down-gradient area are listed as follows:

RECOVERY WELLS			
RW-1	RW-2	RW-5	RW-6
OW-14	OW-58	OW-30	OW-55

2.4.1.2 Hydrocarbon Seep

In June of 2013 during a routine inspection, a hydrocarbon seep was discovered in an isolated area approximately 100 yards west of Tank 101/102. A series of excavations were completed in the area of the seep including installation of six temporary sumps for bi-weekly hydrocarbon recovery. Through 2019 a total of 1,727,574 gallons of liquid (hydrocarbon and ground water) have been recovered from these sumps. To date a total of 49 permanent monitoring wells have been installed with an addition of one pre-existing well, which has been labeled as MKTF-45, and is located in the vicinity of the site investigation. SPH has been measured in Marketing Tank Farm (MKTF) wells located west and northwest of the truck loading rack and marketing tank farm, extending northwest to the location of the hydrocarbon seep. The Gallup Refinery continues to further characterize potential source areas, recovery of liquids from the temporary sumps, and continued sampling of the monitoring wells for characterization and delineation purposes. All 50 wells are

Attachment B – Revised Hall Environmental Analysis Laboratory, Inc. Report, 2nd Quarter 2018 Groundwater Sampling

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 07, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling (API) OrderNo.: 1805106

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 11 sample(s) on 5/2/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 8:15:42 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 8:15:42 PM	37932
Surr: DNOP	142	0	76.7-135	S	%Rec	1	5/3/2018 8:15:42 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 2:10:06 AM	G51049
Surr: BFB	84.7	0	69.3-150		%Rec	1	5/5/2018 2:10:06 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/11/2018 1:08:58 PM	R51220
Chloride	0.57	0.15	2.5	J	mg/L	5	5/11/2018 1:08:58 PM	R51220
Bromide	ND	0.13	0.50		mg/L	5	5/11/2018 1:08:58 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 1:08:58 PM	R51220
Sulfate	ND	1.0	2.5		mg/L	5	5/11/2018 1:08:58 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:24:32 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 11:10:38 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:10:38 AM	A51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 11:10:38 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:10:38 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:10:38 AM	A51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 11:10:38 AM	A51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 11:10:38 AM	A51375
Manganese	0.00041	0.00039	0.0020	J	mg/L	1	5/18/2018 11:10:38 AM	A51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 11:10:38 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:10:38 AM	A51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 2:18:36 PM	B51452
Zinc	0.0068	0.0021	0.010	J	mg/L	1	5/18/2018 11:10:38 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/31/2018 8:36:14 PM	37927
Cadmium	0.00082	0.00058	0.0020	J	mg/L	1	5/31/2018 8:36:14 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:36:14 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:36:14 PM	37927
Iron	ND	0.010	0.020		mg/L	1	6/5/2018 2:38:06 PM	37927
Manganese	0.0015	0.0011	0.0020	J	mg/L	1	5/31/2018 8:36:14 PM	37927
Silver	0.0033	0.0012	0.0050	J	mg/L	1	5/31/2018 8:36:14 PM	37927
Zinc	ND	0.0033	0.010		mg/L	1	5/31/2018 8:36:14 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/3/2018 2:53:56 PM	B51024

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 2:53:56 PM	B51024
Selenium	ND	0.00076	0.0010		mg/L	1	5/3/2018 2:53:56 PM	B51024
Uranium	ND	0.000096	0.00050		mg/L	1	5/3/2018 2:53:56 PM	B51024
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/8/2018 12:10:25 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:10:25 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:10:25 PM	37927
Uranium	ND	0.000068	0.00050		mg/L	1	5/8/2018 12:10:25 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:44:16 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,4-Trimethylbenzene	0.20	0.11	1.0	J	µg/L	1	5/10/2018 1:58:14 PM	W5119
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Acetone	3.6	0.82	10	J	µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 1:58:14 PM	W5119
Surr: 1,2-Dichloroethane-d4	90.0	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119
Surr: Dibromofluoromethane	94.7	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EAST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 1:50:00 PM
Lab ID: 1805106-002 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.2	0.63	1.0		mg/L	1	5/3/2018 8:37:47 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 8:37:47 PM	37932
Surr: DNOP	119	0	76.7-135		%Rec	1	5/3/2018 8:37:47 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.1	0.42	1.0		mg/L	20	5/5/2018 2:33:26 AM	G51049
Surr: BFB	102	0	69.3-150		%Rec	20	5/5/2018 2:33:26 AM	G51049
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.38	0.00099	0.0020		mg/L	1	5/18/2018 11:12:48 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:12:48 AM	A51375
Chromium	0.020	0.0013	0.0060		mg/L	1	5/18/2018 11:12:48 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:12:48 AM	A51375
Iron	0.080	0.016	0.020		mg/L	1	5/18/2018 11:12:48 AM	A51375
Manganese	0.11	0.00039	0.0020	*	mg/L	1	5/18/2018 11:12:48 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:12:48 AM	A51375
Zinc	0.010	0.0021	0.010		mg/L	1	5/18/2018 11:12:48 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.38	0.0010	0.0020		mg/L	1	5/31/2018 8:38:25 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:38:25 PM	37927
Chromium	0.050	0.0018	0.0060		mg/L	1	5/31/2018 8:38:25 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:38:25 PM	37927
Iron	0.20	0.010	0.020		mg/L	1	6/5/2018 2:40:16 PM	37927
Manganese	0.11	0.0011	0.0020	*	mg/L	1	5/31/2018 8:38:25 PM	37927
Silver	0.0013	0.0012	0.0050	J	mg/L	1	5/31/2018 8:38:25 PM	37927
Zinc	0.020	0.0033	0.010		mg/L	1	5/31/2018 8:38:25 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/3/2018 2:56:14 PM	B51024
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 2:56:14 PM	B51024
Selenium	0.0024	0.00076	0.0010		mg/L	1	5/3/2018 2:56:14 PM	B51024
Uranium	ND	0.000096	0.00050		mg/L	1	5/3/2018 2:56:14 PM	B51024
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/8/2018 12:17:17 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:17:17 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:17:17 PM	37927
Uranium	ND	0.000068	0.00050		mg/L	1	5/8/2018 12:17:17 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:46:35 PM	37992

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EAST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 1:50:00 PM
Lab ID: 1805106-002 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	710	0.62	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Toluene	37	0.64	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Ethylbenzene	260	0.93	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Methyl tert-butyl ether (MTBE)	ND	2.4	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
1,2,4-Trimethylbenzene	160	1.1	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
1,3,5-Trimethylbenzene	150	0.87	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Xylenes, Total	600	3.2	15		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124
Surr: Dibromofluoromethane	110	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124
Surr: Toluene-d8	111	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: WEST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:15:00 PM
Lab ID: 1805106-003 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	9.4	0.63	1.0		mg/L	1	5/3/2018 8:59:47 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 8:59:47 PM	37932
Surr: DNOP	116	0	76.7-135		%Rec	1	5/3/2018 8:59:47 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.8	0.42	1.0		mg/L	20	5/5/2018 2:56:45 AM	G51049
Surr: BFB	88.0	0	69.3-150		%Rec	20	5/5/2018 2:56:45 AM	G51049
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.092	0.00099	0.0020		mg/L	1	5/18/2018 11:14:57 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:14:57 AM	A51375
Chromium	0.68	0.0013	0.0060	*	mg/L	1	5/18/2018 11:14:57 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:14:57 AM	A51375
Iron	0.31	0.016	0.020	*	mg/L	1	5/18/2018 11:14:57 AM	A51375
Manganese	1.7	0.0020	0.010	*	mg/L	5	5/18/2018 1:03:35 PM	A51375
Silver	0.0047	0.0018	0.0050	J	mg/L	1	5/18/2018 11:14:57 AM	A51375
Zinc	0.040	0.0021	0.010		mg/L	1	5/18/2018 11:14:57 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.094	0.0010	0.0020		mg/L	1	5/31/2018 8:40:41 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:40:41 PM	37927
Chromium	0.66	0.0018	0.0060	*	mg/L	1	5/31/2018 8:40:41 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:40:41 PM	37927
Iron	0.92	0.010	0.020	*	mg/L	1	6/5/2018 2:42:26 PM	37927
Manganese	1.4	0.0055	0.010	*	mg/L	5	6/5/2018 2:44:25 PM	37927
Silver	0.0074	0.0012	0.0050		mg/L	1	5/31/2018 8:40:41 PM	37927
Zinc	0.065	0.0033	0.010		mg/L	1	5/31/2018 8:40:41 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0050	0.0021	0.0050	J	mg/L	5	5/14/2018 5:49:35 PM	B51261
Lead	ND	0.00087	0.0025		mg/L	5	5/14/2018 5:49:35 PM	B51261
Selenium	0.0075	0.0038	0.0050		mg/L	5	5/14/2018 5:49:35 PM	B51261
Uranium	0.00058	0.00048	0.0025	J	mg/L	5	5/14/2018 5:49:35 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0051	0.0021	0.0050		mg/L	5	5/8/2018 12:19:33 PM	37927
Lead	ND	0.0011	0.0025		mg/L	5	5/8/2018 12:19:33 PM	37927
Selenium	ND	0.0049	0.0050		mg/L	5	5/8/2018 12:19:33 PM	37927
Uranium	0.00069	0.00034	0.0025	J	mg/L	5	5/8/2018 12:19:33 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000097	0.000037	0.00020	J	mg/L	1	5/8/2018 5:48:46 PM	37992

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: WEST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:15:00 PM
Lab ID: 1805106-003 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	2700	6.2	100		µg/L	100	5/11/2018 7:15:00 PM	SL5124
Toluene	16	0.64	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Ethylbenzene	72	0.93	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Methyl tert-butyl ether (MTBE)	ND	2.4	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
1,2,4-Trimethylbenzene	1.8	1.1	10	J	µg/L	10	5/11/2018 7:39:00 PM	SL5124
1,3,5-Trimethylbenzene	ND	0.87	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Xylenes, Total	35	3.2	15		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124
Surr: Dibromofluoromethane	106	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124
Surr: Toluene-d8	111	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 9:21:55 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 9:21:55 PM	37932
Surr: DNOP	117	0	76.7-135		%Rec	1	5/3/2018 9:21:55 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 3:19:53 AM	G51049
Surr: BFB	89.0	0	69.3-150		%Rec	1	5/5/2018 3:19:53 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/11/2018 1:33:48 PM	R51220
Chloride	0.56	0.15	2.5	J	mg/L	5	5/11/2018 1:33:48 PM	R51220
Bromide	ND	0.13	0.50		mg/L	5	5/11/2018 1:33:48 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 1:33:48 PM	R51220
Sulfate	ND	1.0	2.5		mg/L	5	5/11/2018 1:33:48 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:36:56 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 11:17:16 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:17:16 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:17:16 AM	A51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 11:17:16 AM	A51375
Manganese	ND	0.00039	0.0020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 11:17:16 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:17:16 AM	A51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 2:20:44 PM	B51452
Zinc	0.0077	0.0021	0.010	J	mg/L	1	5/18/2018 11:17:16 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/31/2018 8:42:43 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:42:43 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:42:43 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:42:43 PM	37927
Iron	ND	0.010	0.020		mg/L	1	6/5/2018 2:46:38 PM	37927
Manganese	ND	0.0011	0.0020		mg/L	1	5/31/2018 8:42:43 PM	37927
Silver	ND	0.0012	0.0050		mg/L	1	5/31/2018 8:42:43 PM	37927
Zinc	ND	0.0033	0.010		mg/L	1	5/31/2018 8:42:43 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/3/2018 3:05:30 PM	B51024

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:05:30 PM	B51024
Selenium	0.0060	0.00076	0.0010		mg/L	1	5/3/2018 3:05:30 PM	B51024
Uranium	ND	0.000096	0.00050		mg/L	1	5/14/2018 5:55:38 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/8/2018 12:21:50 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:21:50 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:21:50 PM	37927
Uranium	ND	0.000068	0.00050		mg/L	1	5/8/2018 12:21:50 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:50:58 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Toluene	0.078	0.064	1.0	J	µg/L	1	5/10/2018 2:27:40 PM	W5119
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,4-Trimethylbenzene	0.16	0.11	1.0	J	µg/L	1	5/10/2018 2:27:40 PM	W5119
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Acetone	1.4	0.82	10	J	µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 2:27:40 PM	W5119
Surr: 1,2-Dichloroethane-d4	92.9	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119
Surr: Dibromofluoromethane	94.4	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.9	0.63	1.0		mg/L	1	5/3/2018 9:43:51 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 9:43:51 PM	37932
Surr: DNOP	115	0	76.7-135		%Rec	1	5/3/2018 9:43:51 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.59	0.021	0.050		mg/L	1	5/5/2018 3:43:01 AM	G51049
Surr: BFB	180	0	69.3-150	S	%Rec	1	5/5/2018 3:43:01 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.6	0.15	0.50		mg/L	5	5/11/2018 1:58:37 PM	R51220
Chloride	220	0.59	10		mg/L	20	5/11/2018 2:11:02 PM	R51220
Bromide	1.0	0.13	0.50		mg/L	5	5/11/2018 1:58:37 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 1:58:37 PM	R51220
Sulfate	3.6	1.0	2.5		mg/L	5	5/11/2018 1:58:37 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:49:20 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.6	0.0049	0.010		mg/L	5	5/18/2018 1:05:45 PM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:25:48 AM	A51375
Calcium	66	0.078	1.0		mg/L	1	5/18/2018 11:25:48 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:25:48 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:25:48 AM	A51375
Iron	1.8	0.082	0.10	*	mg/L	5	5/18/2018 1:05:45 PM	A51375
Magnesium	13	0.25	1.0		mg/L	1	5/18/2018 11:25:48 AM	A51375
Manganese	0.91	0.00039	0.0020	*	mg/L	1	5/18/2018 11:25:48 AM	A51375
Potassium	0.27	0.11	1.0	J	mg/L	1	5/18/2018 11:25:48 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:25:48 AM	A51375
Sodium	360	0.82	5.0		mg/L	5	5/23/2018 2:22:51 PM	B51452
Zinc	0.0054	0.0021	0.010	J	mg/L	1	5/18/2018 11:25:48 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.2	0.0050	0.010	*	mg/L	5	6/5/2018 2:48:50 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:44:53 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:44:53 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:44:53 PM	37927
Iron	3.7	0.051	0.10	*	mg/L	5	6/5/2018 2:48:50 PM	37927
Manganese	0.94	0.0011	0.0020	*	mg/L	1	5/31/2018 8:44:53 PM	37927
Silver	0.0013	0.0012	0.0050	J	mg/L	1	5/31/2018 8:44:53 PM	37927
Zinc	0.0064	0.0033	0.010	J	mg/L	1	5/31/2018 8:44:53 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0045	0.00042	0.0010		mg/L	1	5/3/2018 3:07:49 PM	B51024

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:07:49 PM	B51024
Selenium	0.0049	0.00076	0.0010		mg/L	1	5/3/2018 3:07:49 PM	B51024
Uranium	0.00016	0.000096	0.00050	J	mg/L	1	5/14/2018 5:58:39 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0047	0.00041	0.0010		mg/L	1	5/8/2018 12:24:06 PM	37927
Lead	0.0012	0.00023	0.00050		mg/L	1	5/8/2018 12:24:06 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:24:06 PM	37927
Uranium	0.00029	0.000068	0.00050	J	mg/L	1	5/8/2018 12:24:06 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:53:11 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	32	0.062	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Toluene	2.3	0.064	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Ethylbenzene	35	0.093	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Methyl tert-butyl ether (MTBE)	99	0.24	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,4-Trimethylbenzene	0.84	0.11	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,3,5-Trimethylbenzene	0.20	0.087	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Naphthalene	7.8	0.11	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1-Methylnaphthalene	11	0.16	4.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Methylnaphthalene	1.7	0.15	4.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
Acetone	9.7	0.82	10	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1-Dichloroethane	0.52	0.40	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Isopropylbenzene	3.7	0.051	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
n-Butylbenzene	0.59	0.13	3.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
n-Propylbenzene	3.7	0.074	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
sec-Butylbenzene	1.2	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
tert-Butylbenzene	0.25	0.10	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Xylenes, Total	0.61	0.32	1.5	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
Surr: 1,2-Dichloroethane-d4	94.4	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119
Surr: Dibromofluoromethane	94.6	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119
Surr: Toluene-d8	96.5	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.65	0.63	1.0	J	mg/L	1	5/3/2018 10:06:04 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 10:06:04 PM	37932
Surr: DNOP	117	0	76.7-135		%Rec	1	5/3/2018 10:06:04 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.9	0.021	0.050		mg/L	1	5/5/2018 4:29:42 AM	G51049
Surr: BFB	167	0	69.3-150	S	%Rec	1	5/5/2018 4:29:42 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.79	0.15	0.50		mg/L	5	5/11/2018 2:48:16 PM	R51220
Chloride	170	0.59	10		mg/L	20	5/11/2018 3:00:40 PM	R51220
Bromide	1.4	0.13	0.50		mg/L	5	5/11/2018 2:48:16 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 2:48:16 PM	R51220
Sulfate	18	1.0	2.5		mg/L	5	5/11/2018 2:48:16 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:01:44 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.2	0.0049	0.010		mg/L	5	5/18/2018 1:07:56 PM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:27:49 AM	A51375
Calcium	83	0.078	1.0		mg/L	1	5/18/2018 11:27:49 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:27:49 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:27:49 AM	A51375
Iron	0.046	0.016	0.020		mg/L	1	5/18/2018 11:27:49 AM	A51375
Magnesium	13	0.25	1.0		mg/L	1	5/18/2018 11:27:49 AM	A51375
Manganese	1.2	0.0020	0.010	*	mg/L	5	5/18/2018 1:07:56 PM	A51375
Potassium	0.36	0.11	1.0	J	mg/L	1	5/18/2018 11:27:49 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:27:49 AM	A51375
Sodium	300	0.82	5.0		mg/L	5	5/23/2018 2:25:04 PM	B51452
Zinc	0.0070	0.0021	0.010	J	mg/L	1	5/18/2018 11:27:49 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.3	0.0050	0.010		mg/L	5	5/31/2018 9:03:46 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:53:23 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:53:23 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:53:23 PM	37927
Iron	0.23	0.010	0.020		mg/L	1	6/5/2018 2:51:05 PM	37927
Manganese	1.2	0.0055	0.010	*	mg/L	5	5/31/2018 9:03:46 PM	37927
Silver	0.0019	0.0012	0.0050	J	mg/L	1	5/31/2018 8:53:23 PM	37927
Zinc	ND	0.0033	0.010		mg/L	1	5/31/2018 8:53:23 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0022	0.00042	0.0010		mg/L	1	5/3/2018 3:10:07 PM	B51024

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:10:07 PM	B51024
Selenium	0.0036	0.00076	0.0010		mg/L	1	5/3/2018 3:10:07 PM	B51024
Uranium	0.0086	0.000096	0.00050		mg/L	1	5/14/2018 6:07:46 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0025	0.00041	0.0010		mg/L	1	5/8/2018 12:26:23 PM	37927
Lead	0.00054	0.00023	0.00050		mg/L	1	5/8/2018 12:26:23 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:26:23 PM	37927
Uranium	0.0089	0.000068	0.00050		mg/L	1	5/8/2018 12:26:23 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:55:24 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	590	0.62	10		µg/L	10	5/11/2018 8:03:00 PM	R51242
Toluene	510	0.64	10		µg/L	10	5/11/2018 8:03:00 PM	R51242
Ethylbenzene	54	0.093	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Methyl tert-butyl ether (MTBE)	32	0.24	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,4-Trimethylbenzene	11	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,3,5-Trimethylbenzene	3.1	0.087	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Naphthalene	8.2	0.11	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1-Methylnaphthalene	3.5	0.16	4.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Methylnaphthalene	1.3	0.15	4.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
Acetone	5.9	0.82	10	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Isopropylbenzene	4.4	0.051	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
4-Isopropyltoluene	0.14	0.096	1.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
n-Butylbenzene	0.30	0.13	3.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
n-Propylbenzene	3.2	0.074	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
sec-Butylbenzene	0.49	0.11	1.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
tert-Butylbenzene	0.16	0.10	1.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Xylenes, Total	58	0.32	1.5		µg/L	1	5/10/2018 3:56:09 PM	W5119
Surr: 1,2-Dichloroethane-d4	95.2	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119
Surr: Dibromofluoromethane	97.4	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 10:28:03 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 10:28:03 PM	37932
Surr: DNOP	113	0	76.7-135		%Rec	1	5/3/2018 10:28:03 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.80	0.021	0.050		mg/L	1	5/5/2018 4:53:02 AM	G51049
Surr: BFB	114	0	69.3-150		%Rec	1	5/5/2018 4:53:02 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.62	0.15	0.50		mg/L	5	5/11/2018 3:13:04 PM	R51220
Chloride	190	0.59	10		mg/L	20	5/11/2018 3:25:29 PM	R51220
Bromide	1.4	0.13	0.50		mg/L	5	5/11/2018 3:13:04 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 3:13:04 PM	R51220
Sulfate	47	1.0	2.5		mg/L	5	5/11/2018 3:13:04 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:14:09 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.093	0.00099	0.0020		mg/L	1	5/18/2018 11:29:56 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:29:56 AM	A51375
Calcium	14	0.078	1.0		mg/L	1	5/18/2018 11:29:56 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:29:56 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:29:56 AM	A51375
Iron	0.040	0.016	0.020		mg/L	1	5/18/2018 11:29:56 AM	A51375
Magnesium	2.6	0.25	1.0		mg/L	1	5/18/2018 11:29:56 AM	A51375
Manganese	0.14	0.00039	0.0020	*	mg/L	1	5/18/2018 11:29:56 AM	A51375
Potassium	1.6	0.11	1.0		mg/L	1	5/18/2018 11:29:56 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:29:56 AM	A51375
Sodium	500	0.82	5.0		mg/L	5	5/23/2018 2:33:35 PM	B51452
Zinc	0.0077	0.0021	0.010	J	mg/L	1	5/18/2018 11:29:56 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.090	0.0010	0.0020		mg/L	1	5/31/2018 8:55:37 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:55:37 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:55:37 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:55:37 PM	37927
Iron	0.074	0.010	0.020		mg/L	1	6/5/2018 2:53:15 PM	37927
Manganese	0.15	0.0011	0.0020	*	mg/L	1	5/31/2018 8:55:37 PM	37927
Silver	ND	0.0012	0.0050		mg/L	1	5/31/2018 8:55:37 PM	37927
Zinc	0.0053	0.0033	0.010	J	mg/L	1	5/31/2018 8:55:37 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	5/3/2018 3:12:25 PM	B51024

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:12:25 PM	B51024
Selenium	0.0029	0.00076	0.0010		mg/L	1	5/3/2018 3:12:25 PM	B51024
Uranium	0.022	0.000096	0.00050		mg/L	1	5/14/2018 6:10:47 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	5/8/2018 12:28:39 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:28:39 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:28:39 PM	37927
Uranium	0.023	0.000068	0.00050		mg/L	1	5/8/2018 12:28:39 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:02:15 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	290	0.62	10		µg/L	10	5/11/2018 8:27:00 PM	R51242
Toluene	6.6	0.064	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Ethylbenzene	8.3	0.093	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Methyl tert-butyl ether (MTBE)	32	0.24	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,4-Trimethylbenzene	1.9	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,3,5-Trimethylbenzene	0.68	0.087	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Naphthalene	0.46	0.11	2.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
1-Methylnaphthalene	0.51	0.16	4.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Acetone	3.2	0.82	10	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Isopropylbenzene	0.78	0.051	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
n-Propylbenzene	0.37	0.074	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
sec-Butylbenzene	0.21	0.11	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Xylenes, Total	13	0.32	1.5		µg/L	1	5/10/2018 4:25:37 PM	W5119
Surr: 1,2-Dichloroethane-d4	92.2	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119
Surr: Dibromofluoromethane	96.5	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	8.9	0.63	1.0		mg/L	1	5/3/2018 10:50:06 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 10:50:06 PM	37932
Surr: DNOP	118	0	76.7-135		%Rec	1	5/3/2018 10:50:06 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.46	0.021	0.050		mg/L	1	5/5/2018 5:16:25 AM	G51049
Surr: BFB	183	0	69.3-150	S	%Rec	1	5/5/2018 5:16:25 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.4	0.15	0.50		mg/L	5	5/11/2018 3:37:53 PM	R51220
Chloride	1500	5.9	100		mg/L	200	5/14/2018 5:16:13 PM	R51270
Bromide	4.2	0.13	0.50		mg/L	5	5/11/2018 3:37:53 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 3:37:53 PM	R51220
Sulfate	12	1.0	2.5		mg/L	5	5/11/2018 3:37:53 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:26:34 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.93	0.00099	0.0020		mg/L	1	5/18/2018 11:32:03 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:32:03 AM	A51375
Calcium	150	0.39	5.0		mg/L	5	5/18/2018 1:18:33 PM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:32:03 AM	A51375
Copper	0.0038	0.0032	0.0060	J	mg/L	1	5/18/2018 11:32:03 AM	A51375
Iron	0.98	0.082	0.10	*	mg/L	5	5/18/2018 1:18:33 PM	A51375
Magnesium	30	0.25	1.0		mg/L	1	5/18/2018 11:32:03 AM	A51375
Manganese	1.1	0.0020	0.010	*	mg/L	5	5/18/2018 1:18:33 PM	A51375
Potassium	3.7	0.11	1.0		mg/L	1	5/18/2018 11:32:03 AM	A51375
Silver	0.0020	0.0018	0.0050	J	mg/L	1	5/18/2018 11:32:03 AM	A51375
Sodium	1200	3.3	20		mg/L	20	5/22/2018 9:45:56 PM	A51451
Zinc	0.019	0.0021	0.010		mg/L	1	5/18/2018 11:32:03 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.2	0.0050	0.010		mg/L	5	5/31/2018 9:05:47 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:57:45 PM	37927
Chromium	0.0086	0.0018	0.0060		mg/L	1	5/31/2018 8:57:45 PM	37927
Copper	0.034	0.0041	0.0060		mg/L	1	5/31/2018 8:57:45 PM	37927
Iron	7.5	0.10	0.20	*	mg/L	10	6/5/2018 2:55:20 PM	37927
Manganese	1.3	0.0055	0.010	*	mg/L	5	5/31/2018 9:05:47 PM	37927
Silver	0.0026	0.0012	0.0050	J	mg/L	1	5/31/2018 8:57:45 PM	37927
Zinc	0.053	0.0033	0.010		mg/L	1	5/31/2018 8:57:45 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0091	0.0021	0.0050		mg/L	5	5/16/2018 3:11:06 PM	A51316

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.0043	0.00087	0.0025		mg/L	5	5/16/2018 3:11:06 PM	A51316
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 3:11:06 PM	A51316
Uranium	0.047	0.00048	0.0025	*	mg/L	5	5/16/2018 3:11:06 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.011	0.0021	0.0050	*	mg/L	5	5/8/2018 12:30:56 PM	37927
Lead	0.013	0.0011	0.0025		mg/L	5	5/8/2018 12:30:56 PM	37927
Selenium	ND	0.0049	0.0050		mg/L	5	5/8/2018 12:30:56 PM	37927
Uranium	0.046	0.00034	0.0025	*	mg/L	5	5/8/2018 12:30:56 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:04:28 PM	37992
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Acenaphthylene	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Aniline	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Anthracene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Azobenzene	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benz(a)anthracene	ND	26	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(a)pyrene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(b)fluoranthene	ND	36	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(g,h,i)perylene	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(k)fluoranthene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzoic acid	92	32	100	JD	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzyl alcohol	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-chloroethoxy)methane	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-chloroethyl)ether	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-chloroisopropyl)ether	ND	24	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-ethylhexyl)phthalate	ND	40	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Bromophenyl phenyl ether	ND	35	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Butyl benzyl phthalate	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Carbazole	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Chloro-3-methylphenol	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Chloroaniline	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Chloronaphthalene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Chlorophenol	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Chlorophenyl phenyl ether	ND	36	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Chrysene	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Di-n-butyl phthalate	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Di-n-octyl phthalate	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Dibenzofuran	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,2-Dichlorobenzene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,3-Dichlorobenzene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,4-Dichlorobenzene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
3,3´-Dichlorobenzidine	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Diethyl phthalate	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Dimethyl phthalate	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dichlorophenol	ND	29	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dimethylphenol	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4,6-Dinitro-2-methylphenol	ND	27	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dinitrophenol	ND	19	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dinitrotoluene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,6-Dinitrotoluene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Fluoranthene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Fluorene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachlorobenzene	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachlorobutadiene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachlorocyclopentadiene	ND	20	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachloroethane	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Indeno(1,2,3-cd)pyrene	ND	35	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Isophorone	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1-Methylnaphthalene	ND	35	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Methylnaphthalene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Methylphenol	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
3+4-Methylphenol	ND	27	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
N-Nitrosodi-n-propylamine	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
N-Nitrosodimethylamine	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
N-Nitrosodiphenylamine	ND	33	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Naphthalene	ND	25	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Nitroaniline	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
3-Nitroaniline	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Nitroaniline	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Nitrobenzene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Nitrophenol	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Nitrophenol	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Pentachlorophenol	ND	26	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Phenanthrene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Phenol	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	33	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Pyridine	ND	27	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,2,4-Trichlorobenzene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4,5-Trichlorophenol	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4,6-Trichlorophenol	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Surr: 2-Fluorophenol	40.5	0	15-114	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: Phenol-d5	32.7	0	15-97.9	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: 2,4,6-Tribromophenol	88.4	0	15-161	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: Nitrobenzene-d5	64.3	0	29.3-120	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: 2-Fluorobiphenyl	82.1	0	17.5-116	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: 4-Terphenyl-d14	66.2	0	21-92.2	D	%Rec	1	5/10/2018 3:07:21 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	68	0.062	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Toluene	0.66	0.064	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Ethylbenzene	6.3	0.093	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Methyl tert-butyl ether (MTBE)	260	2.4	10		µg/L	10	5/14/2018 4:08:00 PM	R51274
1,2,4-Trimethylbenzene	1.6	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Naphthalene	0.74	0.11	2.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
1-Methylnaphthalene	4.7	0.16	4.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Methylnaphthalene	0.36	0.15	4.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Acetone	56	0.82	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Butanone	4.4	1.1	10	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1-Dichloroethane	1.1	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Isopropylbenzene	0.73	0.051	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
4-Isopropyltoluene	0.33	0.096	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
n-Butylbenzene	0.21	0.13	3.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
n-Propylbenzene	0.76	0.074	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
sec-Butylbenzene	0.18	0.11	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Xylenes, Total	3.2	0.32	1.5		µg/L	1	5/11/2018 8:51:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 11:12:16 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 11:12:16 PM	37932
Surr: DNOP	121	0	76.7-135		%Rec	1	5/3/2018 11:12:16 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 7:36:35 AM	G51049
Surr: BFB	90.1	0	69.3-150		%Rec	1	5/5/2018 7:36:35 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/11/2018 4:02:42 PM	R51220
Chloride	2100	5.9	100		mg/L	200	5/21/2018 11:57:28 AM	R51421
Bromide	3.6	0.13	0.50		mg/L	5	5/11/2018 4:02:42 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 4:02:42 PM	R51220
Sulfate	150	1.0	2.5		mg/L	5	5/11/2018 4:02:42 PM	R51220
Nitrate+Nitrite as N	24	0.55	2.0	*	mg/L	10	5/21/2018 12:34:41 PM	R51421
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.10	0.00099	0.0020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Calcium	73	0.078	1.0		mg/L	1	5/18/2018 11:34:15 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:34:15 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:34:15 AM	A51375
Iron	0.032	0.016	0.020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Magnesium	10	0.25	1.0		mg/L	1	5/18/2018 11:34:15 AM	A51375
Manganese	ND	0.00039	0.0020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Potassium	4.6	0.11	1.0		mg/L	1	5/18/2018 11:34:15 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:34:15 AM	A51375
Sodium	1400	3.3	20		mg/L	20	5/24/2018 7:55:47 PM	A51516
Zinc	0.0066	0.0021	0.010	J	mg/L	1	5/18/2018 11:34:15 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	5/31/2018 8:59:46 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:59:46 PM	37927
Chromium	0.0030	0.0018	0.0060	J	mg/L	1	5/31/2018 8:59:46 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:59:46 PM	37927
Iron	0.51	0.010	0.020	*	mg/L	1	6/5/2018 2:57:30 PM	37927
Manganese	0.0087	0.0011	0.0020		mg/L	1	5/31/2018 8:59:46 PM	37927
Silver	0.0018	0.0012	0.0050	J	mg/L	1	5/31/2018 8:59:46 PM	37927
Zinc	0.0084	0.0033	0.010	J	mg/L	1	5/31/2018 8:59:46 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0031	0.0021	0.0050	J	mg/L	5	5/3/2018 3:46:33 PM	B51024

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00087	0.0025		mg/L	5	5/3/2018 3:46:33 PM	B51024
Selenium	0.0065	0.0038	0.0050		mg/L	5	5/16/2018 3:13:29 PM	A51316
Uranium	0.030	0.00048	0.0025	*	mg/L	5	5/16/2018 3:13:29 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0035	0.0021	0.0050	J	mg/L	5	5/8/2018 12:43:57 PM	37927
Lead	ND	0.0011	0.0025		mg/L	5	5/8/2018 12:43:57 PM	37927
Selenium	0.0063	0.0049	0.0050		mg/L	5	5/8/2018 12:43:57 PM	37927
Uranium	0.029	0.00034	0.0025		mg/L	5	5/8/2018 12:43:57 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:06:42 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Toluene	0.32	0.064	1.0	J	µg/L	1	5/11/2018 9:15:00 PM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,4-Trimethylbenzene	0.17	0.11	1.0	J	µg/L	1	5/11/2018 9:15:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Acetone	ND	0.82	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Xylenes, Total	0.54	0.32	1.5	J	µg/L	1	5/11/2018 9:15:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup **Client Sample ID:** DUP02
Project: 2nd Quarter 2018 Groundwater Sampling **Collection Date:** 4/30/2018
Lab ID: 1805106-010 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.8	0.63	1.0		mg/L	1	5/3/2018 11:34:22 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 11:34:22 PM	37932
Surr: DNOP	121	0	76.7-135		%Rec	1	5/3/2018 11:34:22 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.61	0.021	0.050		mg/L	1	5/5/2018 7:59:53 AM	G51049
Surr: BFB	182	0	69.3-150	S	%Rec	1	5/5/2018 7:59:53 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.6	0.15	0.50		mg/L	5	5/11/2018 4:27:31 PM	R51220
Chloride	210	0.59	10		mg/L	20	5/11/2018 4:39:55 PM	R51220
Bromide	1.0	0.13	0.50		mg/L	5	5/11/2018 4:27:31 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 4:27:31 PM	R51220
Sulfate	3.9	1.0	2.5		mg/L	5	5/11/2018 4:27:31 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:51:23 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.6	0.0049	0.010		mg/L	5	5/18/2018 1:22:52 PM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:36:30 AM	A51375
Calcium	66	0.078	1.0		mg/L	1	5/18/2018 11:36:30 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:36:30 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:36:30 AM	A51375
Iron	1.7	0.082	0.10	*	mg/L	5	5/18/2018 1:22:52 PM	A51375
Magnesium	12	0.25	1.0		mg/L	1	5/18/2018 11:36:30 AM	A51375
Manganese	0.92	0.00039	0.0020	*	mg/L	1	5/18/2018 11:36:30 AM	A51375
Potassium	0.25	0.11	1.0	J	mg/L	1	5/18/2018 11:36:30 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:36:30 AM	A51375
Sodium	340	0.82	5.0		mg/L	5	5/23/2018 2:37:39 PM	C51452
Zinc	0.0056	0.0021	0.010	J	mg/L	1	5/18/2018 11:36:30 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.8	0.0050	0.010		mg/L	5	6/5/2018 3:06:07 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 9:01:47 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 9:01:47 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 9:01:47 PM	37927
Iron	3.1	0.051	0.10	*	mg/L	5	6/5/2018 3:06:07 PM	37927
Manganese	0.95	0.0011	0.0020	*	mg/L	1	5/31/2018 9:01:47 PM	37927
Silver	ND	0.0012	0.0050		mg/L	1	5/31/2018 9:01:47 PM	37927
Zinc	0.0034	0.0033	0.010	J	mg/L	1	5/31/2018 9:01:47 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0043	0.00042	0.0010		mg/L	1	5/3/2018 3:39:38 PM	B51024

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018
Lab ID: 1805106-010
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:39:38 PM	B51024
Selenium	0.0016	0.00076	0.0010		mg/L	1	5/3/2018 3:39:38 PM	B51024
Uranium	0.00016	0.000096	0.00050	J	mg/L	1	5/14/2018 6:19:50 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0046	0.00041	0.0010		mg/L	1	5/8/2018 12:35:29 PM	37927
Lead	0.00078	0.00023	0.00050		mg/L	1	5/8/2018 12:35:29 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:35:29 PM	37927
Uranium	0.00023	0.000068	0.00050	J	mg/L	1	5/8/2018 12:35:29 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:08:57 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	38	0.062	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Toluene	2.8	0.064	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Ethylbenzene	46	0.093	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Methyl tert-butyl ether (MTBE)	110	0.24	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,4-Trimethylbenzene	0.88	0.11	1.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Naphthalene	8.4	0.11	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1-Methylnaphthalene	13	0.16	4.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Methylnaphthalene	2.4	0.15	4.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
Acetone	17	0.82	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018
Lab ID: 1805106-010
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Isopropylbenzene	4.5	0.051	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
n-Butylbenzene	0.79	0.13	3.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
n-Propylbenzene	4.9	0.074	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
sec-Butylbenzene	1.6	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
tert-Butylbenzene	0.36	0.10	1.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Xylenes, Total	3.0	0.32	1.5		µg/L	1	5/11/2018 9:39:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018
Lab ID: 1805106-010
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805106-011 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 8:46:29 AM	G5104
Surr: BFB	93.0	0	69.3-150		%Rec	1	5/5/2018 8:46:29 AM	G5104
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,4-Trimethylbenzene	0.15	0.11	1.0	J	µg/L	1	5/10/2018 2:57:06 PM	W5119
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Acetone	ND	0.82	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119

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

Qualifiers:

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

Analytical Report
Lab Order **1805106**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805106-011 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 2:57:06 PM	W5119
Surr: 1,2-Dichloroethane-d4	94.0	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119
Surr: Dibromofluoromethane	94.3	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119
Surr: Toluene-d8	96.1	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119

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

Qualifiers:

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

1805106-008F OAPIS-1
Collected date/time: 04/30/18 16:50

SAMPLE RESULTS - 01

L991012

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	0.0848		0.00500	1	05/09/2018 18:32	WG1103662

Method Blank (MB)

(MB) R3308393-1 05/09/18 17:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L990138-02 Original Sample (OS) • Duplicate (DUP)

(OS) L990138-02 05/09/18 18:04 • (DUP) R3308393-4 05/09/18 18:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L990813-02 Original Sample (OS) • Duplicate (DUP)

(OS) L990813-02 05/09/18 18:21 • (DUP) R3308393-7 05/09/18 18:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3308393-2 05/09/18 18:00 • (LCSD) R3308393-3 05/09/18 18:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.105	0.0956	105	95.6	85.0-115			9.37	20

L990235-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L990235-02 05/09/18 18:06 • (MS) R3308393-5 05/09/18 18:07

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Cyanide	0.100	ND	0.0921	92.1	1	75.0-125	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671729** Units: **mg/L**

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

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671730** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Cadmium	0.0023	0.0020	0.002000	0	114	50	150			
Calcium	0.47	1.0	0.5000	0	94.7	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.7	50	150			J
Copper	0.0058	0.0060	0.006000	0	96.0	50	150			J
Iron	0.027	0.020	0.02000	0	135	50	150			
Magnesium	0.44	1.0	0.5000	0	88.3	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.49	1.0	0.5000	0	98.5	50	150			J
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Zinc	0.0070	0.010	0.005000	0	140	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671731** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.8	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**LCS-A**	SampType: **LCS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **A51375**		RunNo: **51375**						
Prep Date:		Analysis Date: **5/18/2018**		SeqNo: **1671731**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.7	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			
Silver	0.11	0.0050	0.1000	0	108	85	115			
Zinc	0.49	0.010	0.5000	0	97.4	85	115			

Sample ID	**MB-A**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **A51451**		RunNo: **51451**						
Prep Date:		Analysis Date: **5/22/2018**		SeqNo: **1675221**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**BatchQC**	Batch ID: **A51451**		RunNo: **51451**						
Prep Date:		Analysis Date: **5/22/2018**		SeqNo: **1675222**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.49	1.0	0.5000	0	97.9	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **A51451**		RunNo: **51451**						
Prep Date:		Analysis Date: **5/22/2018**		SeqNo: **1675223**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	106	85	115			

Sample ID	**MB-B**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **B51452**		RunNo: **51452**						
Prep Date:		Analysis Date: **5/23/2018**		SeqNo: **1676345**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LCS-B**	SampType: **LCS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **B51452**		RunNo: **51452**						
Prep Date:		Analysis Date: **5/23/2018**		SeqNo: **1676349**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	107	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B51452**	RunNo:	**51452**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1676350**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.43	1.0	0.5000	0	86.0	50	150			J

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C51452**	RunNo:	**51452**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1676401**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C51452**	RunNo:	**51452**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1676402**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.49	1.0	0.5000	0	97.3	50	150			J

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C51452**	RunNo:	**51452**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1676403**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	106	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A51516**	RunNo:	**51516**					
Prep Date:		Analysis Date:	**5/24/2018**	SeqNo:	**1679019**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A51516**	RunNo:	**51516**					
Prep Date:		Analysis Date:	**5/24/2018**	SeqNo:	**1679020**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.50	1.0	0.5000	0	99.4	50	150			J

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID: **LCSW**	Batch ID: **A51516**			RunNo: **51516**						
Prep Date:	Analysis Date: **5/24/2018**			SeqNo: **1679021**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	51	1.0	50.00	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LLLCS-37927** SampType: **LCSLL** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **37927** RunNo: **51094**
Prep Date: **5/3/2018** Analysis Date: **5/7/2018** SeqNo: **1660283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0026	0.0020	0.002000	0	132	50	150			
Cadmium	0.0023	0.0020	0.002000	0	116	50	150			
Chromium	0.0053	0.0060	0.006000	0	88.5	50	150			J
Copper	0.0052	0.0060	0.006000	0	86.8	50	150			J
Iron	0.023	0.020	0.02000	0	115	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0046	0.0050	0.005000	0	91.8	50	150			J
Zinc	0.0063	0.010	0.005000	0	127	50	150			J

Sample ID **LCS-37927** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **37927** RunNo: **51094**
Prep Date: **5/3/2018** Analysis Date: **5/7/2018** SeqNo: **1660284** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0	105	85	115			
Cadmium	0.54	0.0020	0.5000	0	107	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **MB-37927** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **37927** RunNo: **51094**
Prep Date: **5/3/2018** Analysis Date: **5/7/2018** SeqNo: **1660299** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	0.00064	0.0020								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51024**	RunNo: **51024**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1656782** Units: **mg/L**

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

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51024**	RunNo: **51024**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1656783** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	0.00047	0.00050	0.0005000	0	93.2	50	150			J
Selenium	0.0011	0.0010	0.001000	0	113	50	150			
Uranium	0.00047	0.00050	0.0005000	0	93.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51024**	RunNo: **51024**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1656784** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	95.5	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.012	0.00050	0.01250	0	93.3	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666235** Units: **mg/L**

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

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666236** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B51261**	RunNo:	**51261**					
Prep Date:		Analysis Date:	**5/14/2018**	SeqNo:	**1666236**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.6	50	150			J
Lead	0.00049	0.00050	0.0005000	0	99.0	50	150			J
Selenium	0.00095	0.0010	0.001000	0	95.4	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.3	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B51261**	RunNo:	**51261**					
Prep Date:		Analysis Date:	**5/14/2018**	SeqNo:	**1666237**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.012	0.00050	0.01250	0	97.9	85	115			
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	96.3	85	115			

Sample ID	**1805106-003CMS**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**WEST LDU**	Batch ID:	**B51261**	RunNo:	**51261**					
Prep Date:		Analysis Date:	**5/14/2018**	SeqNo:	**1666252**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.14	0.0050	0.1250	0.004987	106	70	130			
Lead	0.055	0.0025	0.06250	0	88.4	70	130			
Selenium	0.12	0.0050	0.1250	0.007517	87.3	70	130			
Uranium	0.063	0.0025	0.06250	0.0005835	100	70	130			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A51316**	RunNo:	**51316**					
Prep Date:		Analysis Date:	**5/16/2018**	SeqNo:	**1669003**	Units:	**mg/L**			

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

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A51316**	RunNo:	**51316**					
Prep Date:		Analysis Date:	**5/16/2018**	SeqNo:	**1669004**	Units:	**mg/L**			

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.6	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669005** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.024	0.0010	0.02500	0	96.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**MB-37927**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**37927**	RunNo:	**51113**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660630**	Units:	**mg/L**			

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

Sample ID	**MSLLLCS-37927**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**37927**	RunNo:	**51113**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660631**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00095	0.0010	0.001000	0	94.9	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00090	0.0010	0.001000	0	90.3	50	150			J
Uranium	0.00053	0.00050	0.0005000	0	106	50	150			

Sample ID	**MSLCS-37927**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**37927**	RunNo:	**51113**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660632**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.3	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Uranium	0.014	0.00050	0.01250	0	108	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**MB-37992**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**37992**	RunNo:	**51126**					
Prep Date:	**5/8/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660989**	Units:	**mg/L**			

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

Sample ID	**LCS-37992**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**37992**	RunNo:	**51126**					
Prep Date:	**5/8/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660990**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.7	80	120			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664778** Units: **mg/L**

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

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.8	0.50	5.000	0	95.7	90	110			
Bromide	2.5	0.10	2.500	0	98.4	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	9.5	0.50	10.00	0	94.6	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51270**	RunNo: **51270**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666618** Units: **mg/L**

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

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51270**	RunNo: **51270**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666619** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51421**	RunNo: **51421**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673451** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **LCSW**	Batch ID: **R51421**	RunNo: **51421**			
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673452**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0	90.9	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.4	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**LCS-37932**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**37932**		RunNo:	**50978**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/3/2018**		SeqNo:	**1656856**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		4.9	1.0	5.000	0	98.7	70	130			
Surr: DNOP		0.56		0.5000		112	76.7	135			

Sample ID	**MB-37932**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**37932**		RunNo:	**50978**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/3/2018**		SeqNo:	**1656857**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		ND	1.0								
Motor Oil Range Organics (MRO)		ND	5.0								
Surr: DNOP		1.2		1.000		117	76.7	135			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.8	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658204** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	105	79.5	127			
Surr: BFB	21		20.00		106	69.3	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1666418** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1666419** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **W51196**	RunNo: **51196**	
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663347**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	0.25	1.0								J
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51196**	RunNo: **51196**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663347** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.4	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	9.6		10.00		96.3	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51196**	RunNo: **51196**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663350** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.8	70	130			
Toluene	19	1.0	20.00	0	93.5	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **W51196**	RunNo: **51196**							
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663350**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	96.2	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.5	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.7	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **R51242**	RunNo: **51242**							
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665695**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**							
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.31	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**	
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.12	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666778** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **lcs-37947**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663208** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.4	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	84.3	40.5	108			
2-Chlorophenol	150	10	200.0	0	74.3	35	103			
1,4-Dichlorobenzene	68	10	100.0	0	68.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	83.2	35.6	91.4			
N-Nitrosodi-n-propylamine	81	10	100.0	0	81.4	41.6	114			
4-Nitrophenol	140	10	200.0	0	71.4	20.7	74.3			
Pentachlorophenol	150	20	200.0	0	75.9	25.3	98.5			
Phenol	120	10	200.0	0	61.6	20.9	75.1			
Pyrene	78	10	100.0	0	78.5	45.6	108			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		67.5	15	114			
Surr: Phenol-d5	120		200.0		59.6	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.4	15	161			
Surr: Nitrobenzene-d5	75		100.0		75.4	29.3	120			
Surr: 2-Fluorobiphenyl	79		100.0		79.2	17.5	116			
Surr: 4-Terphenyl-d14	110		100.0		108	21	92.2			S

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	14	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **mb-37947**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**		
Client ID: **PBW**	Batch ID: **37947**		RunNo: **51189**		
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**		SeqNo: **1663209**	Units: **µg/L**	

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

Qualifiers:

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

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **mb-37947**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**		
Client ID: **PBW**	Batch ID: **37947**		RunNo: **51189**		
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**		SeqNo: **1663209**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	92		200.0		45.9	15	114			
Surr: Phenol-d5	62		200.0		31.2	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		90.8	15	161			
Surr: Nitrobenzene-d5	64		100.0		64.0	29.3	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.3	17.5	116			
Surr: 4-Terphenyl-d14	64		100.0		64.3	21	92.2			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1805106 RcptNo: 1

Received By: Isaiah Ortiz 5/2/2018 9:20:00 AM I
Completed By: Anne Thorne 5/2/2018 11:44:03 AM Anne Thorne
Reviewed By: ENM 5/3/18
CB: JO

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 3D, 1 (<2 or >12 unless noted)
Adjusted? NO
Checked by: JMO

Special Handling (if applicable)

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

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 5/2/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	0.4	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	0920	H_2O	EB02	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	001												X				
				125 ml Plastic-1	HNO_3	002												X	X			
				125 ml Plastic-1	H_2SO_4	001													X			
				125 ml Plastic-1	Neat	001													X			

Date	Time	Relinquished by	Received by	Courier	Date	Time
5/1/18	0700		I. Ortiz		5/2/18	920
Date	Time	Relinquished by	Received by		Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
4/30/18	1350	H_2O	EAST LDU	40ml VOA-5	HCl	002	X		X													
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	002												X				
				125 ml Plastic-1	HNO_3	002												X				

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/1/18	0700			Courier		
					5/2/18	920
Date:	Time:	Relinquished by:	Received by:		Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805166	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
4/30/18	1415	H_2O	~~EAST~~ WEST LDU	40ml VOA-5	HCl	203	X		X													
↓	↓	↓	↓	250 ml Amber-1	Neat	203			X													
↓	↓	↓	↓	250 ml Plastic-1	HNO_3	203												X				
↓	↓	↓	↓	125 ml Plastic-1	HNO_3	203												X				

Date	Time	Relinquished by	Received by	Date	Time
5/1/18	0700	[signature]	Courier [signature]	5/2/18	920

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1430	H_2O	FB02	40ml VOA-5	HCl	204			X							X						
				250 ml Amber-1	Neat	204			X													
				250 ml Plastic-1	HNO_3	204												X				
				125 ml Plastic-1	HNO_3	204												X	X			
				125 ml Plastic-1	H_2SO_4	204													X			
				125 ml Plastic-1	Neat	204													X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/1/18	0700			5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1510	H_2O	NAPIS-2	40ml VOA-5	HCl	105			X							X						
				250 ml Amber-1	Neat	105			X													
				250 ml Plastic-1	HNO_3	105												X				
				125 ml Plastic-1	HNO_3	105												X	X			
				125 ml Plastic-1	H_2SO_4	105													X			
				125 ml Plastic-1	Neat	105													X			

Date: 5/1/18 Time: 0700 Relinquished by:
Received by: Date: 5/2/18 Time: 920
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1540	H_2O	KA-3	40ml VOA-5	HCl	106			X							X						
				250 ml Amber-1	Neat	106			X													
				250 ml Plastic-1	HNO_3	106												X				
				125 ml Plastic-1	HNO_3	106												X	X			
				125 ml Plastic-1	H_2SO_4	106													X			
				125 ml Plastic-1	Neat	106													X			

Date	Time	Relinquished by	Received by	Date	Time
5/1/18	0700		Courier		
				5/2/18	920
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1605	H_2O	NAPIS-3	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	004												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	006													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/1/18	0700		Courier		
				5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
4/30/18	1650	H_2O	OAPIS-1	40ml VOA-5	HCl	-008			X							X						
				1 Liter Amber - 2	Neat	-008											X					
				250 ml Amber-1	Neat	-008			X													
				250 ml Plastic-1	HNO_3	-008												X				
				125 ml Plastic-1	HNO_3	-008												X	X			
				125 ml Plastic-1	H_2SO_4	-008													X			
				125 ml Plastic-1	Neat	-008													X			
				500 ml Plastic-1	NAOH	-008														X		

Date	Time	Relinquished by	Received by	Date	Time
5/1/18	0700	[signature]	Courier I. [signature]	5/02/18	920

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1720	H_2O	STP-1-NW	40ml VOA-5	HCl	209			X							X						
				250 ml Amber-1	Neat	209			X													
				250 ml Plastic-1	HNO_3	209												X				
				125 ml Plastic-1	HNO_3	209												X	X			
				125 ml Plastic-1	H_2SO_4	209													X			
				125 ml Plastic-1	Neat	209													X			

Date: 5/1/18 Time: 0700 Relinquished by: _____ Received by: _____ Date: 5/2/18 Time: 920

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

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106 KT 05/02/18	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	—	H_2O	DUP02	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	004												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	006													X			
4/30/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCL	007										X						

Date	Time	Relinquished by:	Received by:	Date	Time
5/1/18	0700			5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 22047

CONDITIONS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 22047
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
jburdine	Accepted for Record Retention Purposes - Only	11/21/2022