

AP - 111

**ANNUAL GW
MONITORING REPORT
(14 of 29)**

2016

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609449

Date Reported: 10/18/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-1

Project: 2016 Annual

Collection Date: 9/6/2016 1:00:00 PM

Lab ID: 1609449-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 1:52:46 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 1:52:46 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 1:52:46 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 1:52:46 PM	R37199
Surr: 1,2-Dichloroethane-d4	99.9	0	70-130		%Rec	1	9/14/2016 1:52:46 PM	R37199
Surr: 4-Bromofluorobenzene	94.6	0	70-130		%Rec	1	9/14/2016 1:52:46 PM	R37199

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	9/14/2016 1:52:46 PM	R37199
Surr: Toluene-d8	92.7	0	70-130		%Rec	1	9/14/2016 1:52:46 PM	R37199
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/14/2016 1:52:46 PM	G37199
Surr: BFB	91.1	0	70-130		%Rec	1	9/14/2016 1:52:46 PM	G37199

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Analytical Report

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Date Reported: 10/18/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-10

Project: 2016 Annual

Collection Date: 9/6/2016 11:40:00 AM

Lab ID: 1609449-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
1,2-Dibromoethane	ND	0.0033	0.010		µg/L	1	9/13/2016 5:54:21 PM	27428
Analyst: JME								
EPA METHOD 8015M/D: DIESEL RANGE								
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 9:03:43 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 9:03:43 PM	27430
Surr: DNOP	108	0	77.1-144		%Rec	1	9/12/2016 9:03:43 PM	27430
Analyst: TOM								
EPA METHOD 300.0: ANIONS								
Fluoride	ND	0.25	0.50		mg/L	5	9/10/2016 4:07:06 AM	R37119
Chloride	1100	5.1	50		mg/L	100	9/15/2016 6:03:39 AM	R37206
Bromide	1.1	0.22	0.50		mg/L	5	9/10/2016 4:07:06 AM	R37119
Phosphorus, Orthophosphate (As P)	1.4	0.38	2.5	JH	mg/L	5	9/10/2016 4:07:06 AM	R37119
Sulfate	230	0.71	2.5		mg/L	5	9/10/2016 4:07:06 AM	R37119
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/10/2016 4:44:20 AM	R37119
Analyst: LGT								
EPA METHOD 200.7: DISSOLVED METALS								
Barium	0.064	0.0013	0.0020		mg/L	1	9/16/2016 2:33:30 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 2:33:30 PM	B37246
Calcium	110	2.5	5.0		mg/L	5	9/16/2016 2:35:28 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 2:33:30 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 2:33:30 PM	B37246
Iron	ND	0.020	0.020		mg/L	1	9/16/2016 2:33:30 PM	B37246
Magnesium	20	0.50	1.0		mg/L	1	9/16/2016 2:33:30 PM	B37246
Manganese	0.12	0.00032	0.0020	*	mg/L	1	9/16/2016 2:33:30 PM	B37246
Potassium	1.8	0.50	1.0		mg/L	1	9/16/2016 2:33:30 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 2:33:30 PM	B37246
Sodium	790	5.0	10		mg/L	10	9/19/2016 4:14:29 PM	B37295
Zinc	0.062	0.0028	0.010		mg/L	1	9/16/2016 2:33:30 PM	B37246
Analyst: ELS								
EPA METHOD 200.7: TOTAL METALS								
Barium	0.061	0.00079	0.0020		mg/L	1	9/21/2016 2:54:55 PM	27574
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 2:54:55 PM	27574
Chromium	ND	0.0027	0.0060		mg/L	1	9/21/2016 2:54:55 PM	27574
Copper	ND	0.0030	0.0060		mg/L	1	9/21/2016 2:54:55 PM	27574
Iron	ND	0.020	0.020		mg/L	1	9/21/2016 2:54:55 PM	27574
Manganese	0.11	0.00027	0.0020	*	mg/L	1	9/21/2016 2:54:55 PM	27574
Silver	ND	0.0015	0.0050		mg/L	1	9/21/2016 2:54:55 PM	27574
Zinc	ND	0.0027	0.010		mg/L	1	9/21/2016 2:54:55 PM	27574
Analyst: MED								
EPA 200.8: DISSOLVED METALS								
Arsenic	0.0027	0.00069	0.0050	J	mg/L	5	9/21/2016 8:07:51 PM	A37386
Lead	0.00020	0.00017	0.00050	J	mg/L	1	9/20/2016 2:51:41 PM	B37327

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Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Selenium	0.015	0.0011	0.0050		mg/L	5	9/21/2016 8:07:51 PM	A37386
Uranium	0.056	0.00026	0.0025	*	mg/L	5	9/21/2016 8:07:51 PM	A37386
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0035	0.0011	0.0050	J	mg/L	5	9/21/2016 4:48:58 PM	27574
Lead	0.00019	0.000081	0.00050	J	mg/L	1	9/20/2016 6:35:08 PM	27574
Selenium	0.013	0.00019	0.0010		mg/L	1	9/20/2016 6:35:08 PM	27574
Uranium	0.056	0.00087	0.0025	*	mg/L	5	9/21/2016 4:48:58 PM	27574
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000058	0.000053	0.00020	J	mg/L	1	9/15/2016 1:50:18 PM	27494
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Methyl tert-butyl ether (MTBE)	35	0.21	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2-Dichloroethane (EDC)	0.73	0.12	1.0	J	µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 2:21:39 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 2:21:39 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 2:21:39 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
cis-1,2-DCE	0.29	0.12	1.0	J	µg/L	1	9/14/2016 2:21:39 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 2:21:39 PM	R37199

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EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,1-Dichloroethane	0.93	0.11	1.0	J	µg/L	1	9/14/2016 2:21:39 PM	R37199
1,1-Dichloroethene	0.76	0.11	1.0	J	µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 2:21:39 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 2:21:39 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 2:21:39 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 2:21:39 PM	R37199
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	9/14/2016 2:21:39 PM	R37199
Surr: 4-Bromofluorobenzene	94.1	0	70-130		%Rec	1	9/14/2016 2:21:39 PM	R37199

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	9/14/2016 2:21:39 PM	R37199
Surr: Toluene-d8	92.5	0	70-130		%Rec	1	9/14/2016 2:21:39 PM	R37199
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	0.040	0.015	0.050	J	mg/L	1	9/14/2016 2:21:39 PM	G37199
Surr: BFB	92.4	0	70-130		%Rec	1	9/14/2016 2:21:39 PM	G37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609449

Date Reported: 10/18/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 Annual

Collection Date:

Lab ID: 1609449-004

Matrix: TRIP BLANK

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Toluene	ND	0.12	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Naphthalene	ND	0.093	2.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Acetone	ND	4.9	10		µg/L	1	9/17/2016 4:50:28 AM	W37277
Bromobenzene	ND	0.098	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Bromoform	ND	0.10	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Bromomethane	ND	0.78	3.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
2-Butanone	ND	0.74	10		µg/L	1	9/17/2016 4:50:28 AM	W37277
Carbon disulfide	ND	0.60	10		µg/L	1	9/17/2016 4:50:28 AM	W37277
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Chloroethane	ND	0.19	2.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Chloroform	ND	0.089	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Chloromethane	ND	0.21	3.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Dibromomethane	ND	0.12	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/17/2016 4:50:28 AM	W37277

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609449

Date Reported: 10/18/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 Annual

Collection Date:

Lab ID: 1609449-004

Matrix: TRIP BLANK

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
2-Hexanone	ND	0.84	10		µg/L	1	9/17/2016 4:50:28 AM	W37277
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/17/2016 4:50:28 AM	W37277
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Styrene	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/17/2016 4:50:28 AM	W37277
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/17/2016 4:50:28 AM	W37277
Surr: 1,2-Dichloroethane-d4	95.8	0	70-130		%Rec	1	9/17/2016 4:50:28 AM	W37277
Surr: 4-Bromofluorobenzene	93.3	0	70-130		%Rec	1	9/17/2016 4:50:28 AM	W37277
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	9/17/2016 4:50:28 AM	W37277
Surr: Toluene-d8	90.5	0	70-130		%Rec	1	9/17/2016 4:50:28 AM	W37277

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
	R	RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-B		SampType:	MBLK		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	PBW		Batch ID:	B37246		RunNo:	37246			
Prep Date:			Analysis Date:	9/16/2016		SeqNo:	1155991	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								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS-B		SampType:	LCS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	LCSW		Batch ID:	B37246		RunNo:	37246			
Prep Date:			Analysis Date:	9/16/2016		SeqNo:	1155992	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	98.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	49	1.0	50.00	0	98.3	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.0	85	115			
Iron	0.48	0.020	0.5000	0	96.6	85	115			
Magnesium	49	1.0	50.00	0	97.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.0	85	115			
Potassium	48	1.0	50.00	0	95.7	85	115			
Silver	0.10	0.0050	0.1000	0	99.9	85	115			
Sodium	48	1.0	50.00	0	96.0	85	115			
Zinc	0.50	0.010	0.5000	0	99.0	85	115			

Sample ID	LLCS-B		SampType:	LCSLL		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	B37246		RunNo:	37246			
Prep Date:			Analysis Date:	9/16/2016		SeqNo:	1155993	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Cadmium	0.0017	0.0020	0.002000	0	87.0	50	150			J
Calcium	0.56	1.0	0.5000	0	111	50	150			J
Chromium	0.0056	0.0060	0.006000	0	94.0	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
R RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LLLCS-B			SampType:	LCSLL			TestCode:	EPA Method 200.7: Dissolved Metals		
Client ID:	BatchQC			Batch ID:	B37246			RunNo:	37246		
Prep Date:				Analysis Date:	9/16/2016			SeqNo:	1155993		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	0.0043	0.0060	0.006000	0	71.8	50	150			J	
Iron	0.023	0.020	0.02000	0	116	50	150				
Magnesium	0.53	1.0	0.5000	0	107	50	150			J	
Manganese	0.0022	0.0020	0.002000	0	112	50	150				
Potassium	0.59	1.0	0.5000	0	119	50	150			J	
Silver	0.0053	0.0050	0.005000	0	106	50	150				
Sodium	0.48	1.0	0.5000	0	95.6	50	150			J	
Zinc	0.0067	0.010	0.005000	0	135	50	150			J	

Sample ID	MB-B			SampType:	MBLK			TestCode:	EPA Method 200.7: Dissolved Metals		
Client ID:	PBW			Batch ID:	B37295			RunNo:	37295		
Prep Date:				Analysis Date:	9/19/2016			SeqNo:	1158025		
								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:	B37295			RunNo:	37295		
Prep Date:				Analysis Date:	9/19/2016			SeqNo:	1158026		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Sodium	50	1.0	50.00	0	101	85	115				

Sample ID	LLLCS-B			SampType:	LCSLL			TestCode:	EPA Method 200.7: Dissolved Metals		
Client ID:	BatchQC			Batch ID:	B37295			RunNo:	37295		
Prep Date:				Analysis Date:	9/19/2016			SeqNo:	1158027		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Sodium	0.55	1.0	0.5000	0	111	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
R	RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27574		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	27574		RunNo:	37369			
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161346	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								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-27574		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	27574		RunNo:	37369			
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161347	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	97.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Copper	0.48	0.0060	0.5000	0	95.7	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.9	85	115			
Silver	0.091	0.0050	0.1000	0	91.1	85	115			
Zinc	0.48	0.010	0.5000	0	95.5	85	115			

Sample ID	LLCS-27574		SampType:	LCSLL		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	27574		RunNo:	37369			
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161348	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Cadmium	0.0015	0.0020	0.002000	0	76.5	50	150			J
Chromium	0.0069	0.0060	0.006000	0	115	50	150			
Copper	0.0060	0.0060	0.006000	0	100	50	150			
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0049	0.0050	0.005000	0	98.8	50	150			J
Zinc	0.0052	0.010	0.005000	0	104	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
R RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: LCSW	Batch ID: B37327			RunNo: 37327						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1160758		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	96.8	85	115			
Selenium	0.024	0.0010	0.02500	0	95.3	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: B37327			RunNo: 37327						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1160760		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00098	0.0010	0.001000	0	98.0	50	150			J

Sample ID MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID: PBW	Batch ID: B37327			RunNo: 37327						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1160762		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: LCSW	Batch ID: A37386			RunNo: 37386						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1162017		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	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	97.7	85	115			
Uranium	0.012	0.00050	0.01250	0	98.7	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: A37386			RunNo: 37386						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1162020		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	98.4	50	150			J
Selenium	0.0010	0.0010	0.001000	0	102	50	150			
Uranium	0.00049	0.00050	0.0005000	0	97.6	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
R RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	A37386	RunNo:	37386					
Prep Date:		Analysis Date:	9/21/2016	SeqNo:	1162022	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609449-001FMSDL			SampType:	MSDLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	OW-1			Batch ID:	27574			RunNo:	37355		
Prep Date:	9/19/2016			Analysis Date:	9/20/2016			SeqNo:	1160645		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.003097	88.3	70	130	4.15	20		

Sample ID	1609449-001FMSLL			SampType:	MSLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	OW-1			Batch ID:	27574			RunNo:	37355		
Prep Date:	9/19/2016			Analysis Date:	9/20/2016			SeqNo:	1160646		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.024	0.0010	0.02500	0.003097	84.2	70	130				

Sample ID	MB-27574			SampType:	MBLK			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	PBW			Batch ID:	27574			RunNo:	37355		
Prep Date:	9/19/2016			Analysis Date:	9/20/2016			SeqNo:	1160661		
								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	MSLCS-27574			SampType:	LCS			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	LCSW			Batch ID:	27574			RunNo:	37355		
Prep Date:	9/19/2016			Analysis Date:	9/20/2016			SeqNo:	1160663		
								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	96.7	85	115				
Lead	0.012	0.00050	0.01250	0	97.8	85	115				
Selenium	0.024	0.0010	0.02500	0	96.0	85	115				
Uranium	0.012	0.00050	0.01250	0	99.9	85	115				

Sample ID	MSLLCS-27574			SampType:	LCSLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	BatchQC			Batch ID:	27574			RunNo:	37355		
Prep Date:	9/19/2016			Analysis Date:	9/20/2016			SeqNo:	1160665		
								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	95.2	50	150			J	
Lead	0.00049	0.00050	0.0005000	0	97.8	50	150			J	
Selenium	0.00091	0.0010	0.001000	0	91.2	50	150			J	
Uranium	0.00049	0.00050	0.0005000	0	98.0	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
R RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609449-001FMSDL			SampType:	MSDLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	OW-1		Batch ID:	27574		RunNo:	37385				
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161913		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.026	0.0025	0.01250	0.01475	88.5	70	130	5.49	20		
Selenium	0.028	0.0050	0.02500	0.004078	94.0	70	130	7.03	20		
Uranium	0.053	0.0025	0.01250	0.04474	66.8	70	130	7.02	20	S	

Sample ID	1609449-001FMSLL			SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	OW-1		Batch ID:	27574		RunNo:	37385				
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161914		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.024	0.0025	0.01250	0.01475	77.5	70	130				
Selenium	0.026	0.0050	0.02500	0.004078	86.5	70	130				
Uranium	0.049	0.0025	0.01250	0.04474	38.0	70	130			S	

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27494		SampType:	MBLK		TestCode:	EPA Method 245.1: Mercury				
Client ID:	PBW		Batch ID:	27494		RunNo:	37231				
Prep Date:	9/14/2016		Analysis Date:	9/15/2016		SeqNo:	1155489		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	ND	0.00020									

Sample ID	LCS-27494			SampType:	LCS		TestCode:	EPA Method 245.1: Mercury			
Client ID:	LCSW			Batch ID:	27494		RunNo:	37231			
Prep Date:	9/14/2016			Analysis Date:	9/15/2016		SeqNo:	1155490		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0050	0.00020	0.005000	0	99.4	80	120				

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R37119			RunNo: 37119						
Prep Date:	Analysis Date: 9/9/2016			SeqNo: 1150886		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								
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: R37119			RunNo: 37119						
Prep Date:	Analysis Date: 9/9/2016			SeqNo: 1150887		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	107	90	110			
Chloride	5.0	0.50	5.000	0	100	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	103	90	110			
Sulfate	10	0.50	10.00	0	101	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	90	110			

Sample ID MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R37206			RunNo: 37206						
Prep Date:	Analysis Date: 9/14/2016			SeqNo: 1154772		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: R37206			RunNo: 37206						
Prep Date:	Analysis Date: 9/14/2016			SeqNo: 1154773		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27428		SampType: MBLK		TestCode: EPA Method 8011/504.1: EDB					
Client ID:	PBW		Batch ID: 27428		RunNo: 37191					
Prep Date:	9/12/2016		Analysis Date: 9/13/2016		SeqNo: 1154056		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	LCS-27428		SampType:	LCS		TestCode:	EPA Method 8011/504.1: EDB				
Client ID:	LCSW		Batch ID:	27428		RunNo:	37191				
Prep Date:	9/12/2016		Analysis Date:	9/13/2016		SeqNo:	1154057		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
1,2-Dibromoethane	0.11	0.010	0.1000	0	106	70	130				

Sample ID	1609449-001CMS		SampType:	MS		TestCode:	EPA Method 8011/504.1: EDB				
Client ID:	OW-1		Batch ID:	27428		RunNo:	37191				
Prep Date:	9/12/2016		Analysis Date:	9/13/2016		SeqNo:	1154097		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
1,2-Dibromoethane	0.087	0.010	0.1000	0	86.5	57.8	147				

Sample ID	1609449-001CMSD		SampType:	MSD		TestCode:	EPA Method 8011/504.1: EDB				
Client ID:	OW-1		Batch ID:	27428		RunNo:	37191				
Prep Date:	9/12/2016		Analysis Date:	9/13/2016		SeqNo:	1154098		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
1,2-Dibromoethane	0.090	0.010	0.1000	0	90.0	57.8	147	3.94	31.5		

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
R RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LCS-27430		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 27430		RunNo: 37116					
Prep Date:	9/12/2016		Analysis Date: 9/12/2016		SeqNo: 1151166		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	121	63.2	155			
Surr: DNOP	0.55		0.5000		111	77.1	144			

Sample ID	MB-27430		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW		Batch ID: 27430		RunNo: 37116					
Prep Date:	9/12/2016		Analysis Date: 9/12/2016		SeqNo: 1151167		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	1.1		1.000		108	77.1	144			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R37199			RunNo: 37199					
Prep Date:		Analysis Date: 9/14/2016			SeqNo: 1154193	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	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	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.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID rb	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES					
Client ID: PBW	Batch ID: R37199				RunNo: 37199					
Prep Date:	Analysis Date: 9/14/2016				SeqNo: 1154193	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	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID 100ng lcsb	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW	Batch ID: R37199				RunNo: 37199					
Prep Date:	Analysis Date: 9/14/2016				SeqNo: 1154194	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	19	1.0	20.00	0	95.8	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
R	RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID 100ng lcsb	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R37199			RunNo: 37199						
Prep Date:	Analysis Date: 9/14/2016			SeqNo: 1154194		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		95.5	70	130			

Sample ID 1609449-001a ms	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: OW-1	Batch ID: R37199			RunNo: 37199						
Prep Date:	Analysis Date: 9/14/2016			SeqNo: 1154203		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	20	1.0	20.00	0	97.6	70	130			
Chlorobenzene	19	1.0	20.00	0	93.5	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.9	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.3	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID 1609449-001a msd	SampType: MSD			TestCode: EPA Method 8260B: VOLATILES						
Client ID: OW-1	Batch ID: R37199			RunNo: 37199						
Prep Date:	Analysis Date: 9/14/2016			SeqNo: 1154211		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130	1.13	20	
Toluene	20	1.0	20.00	0	98.8	70	130	1.17	20	
Chlorobenzene	19	1.0	20.00	0	92.6	70	130	0.984	20	
1,1-Dichloroethene	20	1.0	20.00	0	98.1	70	130	1.29	20	
Trichloroethene (TCE)	21	1.0	20.00	0	103	70	130	1.64	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.3		10.00		93.3	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		106	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		95.8	70	130	0	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
R RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W37277			RunNo: 37277					
Prep Date:		Analysis Date: 9/16/2016			SeqNo: 1157453	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	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	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.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID rb	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES					
Client ID: PBW	Batch ID: W37277				RunNo: 37277					
Prep Date:	Analysis Date: 9/16/2016				SeqNo: 1157453	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	9.8		10.00		98.4	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.1		10.00		90.8	70	130			

Sample ID 100ng lcs	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW	Batch ID: W37277				RunNo: 37277					
Prep Date:	Analysis Date: 9/16/2016				SeqNo: 1157454	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.9	70	130			
Toluene	17	1.0	20.00	0	85.8	70	130			
Chlorobenzene	16	1.0	20.00	0	82.2	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
R RPD outside accepted recovery limits	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#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: W37277			RunNo: 37277					
Prep Date:		Analysis Date: 9/16/2016			SeqNo: 1157454		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	88.0	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.3	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609449

18-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	G37199	RunNo:	37199					
Prep Date:		Analysis Date:	9/14/2016	SeqNo:	1154472	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	9.4		10.00		94.1	70	130			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	G37199	RunNo:	37199					
Prep Date:		Analysis Date:	9/14/2016	SeqNo:	1154473	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	75.4	118			
Surr: BFB	10		10.00		100	70	130			

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
R RPD outside accepted recovery limits
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

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1609449**

RcptNo: 1

Received by/date:

AG

09/08/14

Logged By: **Ashley Gallegos**

9/8/2016 5:10:00 PM

Completed By: **Ashley Gallegos**

9/9/2016 11:50:22 AM

Reviewed By:

Je 09/09/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

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

of preserved
bottles checked
for pH:

6
($\geq$ or >12 unless noted)

Adjusted?

NO
as

Checked by:

Special Handling (if applicable)

16. 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:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address: NOTE NEW ADDRESS

92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler: C. JOHNSON

On ice: ☒ Yes ☐ No

Sample Temperature: 10°C

Date

Time

Matrix

Sample Request ID

Container Type and #

Preservative Type

HEAL No.

8260+MTBE

8270C + PHENOLS

8015D

WQCC Metals - Total

WQCC Metals - Dissolved (Filtered)

Major Cations/Anions

8011D FOR EDB

Air Bubbles (Y or N)

Date: 9/8/16

Time: 1500

Date: 9/8/16

Time: 1710

Relinquished by:

Relinquished by:

Received by:

Received by:

Date: 9/8/16

Time: 1500

Date: 9/8/16

Time: 1710

Remarks:

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



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request



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

October 11, 2016

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2016 Annual

OrderNo.: 1609451

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/8/2016 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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2C

Project: 2016 Annual

Collection Date: 9/8/2016 12:25:00 PM

Lab ID: 1609451-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 9:31:28 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 9:31:28 PM	27430
Surr: DNOP	112	0	77.1-144		%Rec	1	9/12/2016 9:31:28 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	1.9	0.050	0.10		mg/L	1	9/12/2016 10:21:02 PM	A37143
Chloride	42	1.0	10		mg/L	20	9/12/2016 10:33:27 PM	A37143
Bromide	0.098	0.044	0.10	J	mg/L	1	9/12/2016 10:21:02 PM	A37143
Phosphorus, Orthophosphate (As P _i)	ND	0.076	0.50	H	mg/L	1	9/12/2016 10:21:02 PM	A37143
Sulfate	270	2.8	10		mg/L	20	9/12/2016 10:33:27 PM	A37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 1:09:01 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.016	0.0013	0.0020		mg/L	1	9/19/2016 4:16:29 PM	B37295
Cadmium	ND	0.00075	0.0020		mg/L	1	9/19/2016 4:16:29 PM	B37295
Calcium	2.0	0.50	1.0		mg/L	1	9/19/2016 4:16:29 PM	B37295
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2016 4:16:29 PM	B37295
Copper	ND	0.0040	0.0060		mg/L	1	9/19/2016 4:16:29 PM	B37295
Iron	ND	0.020	0.020		mg/L	1	9/19/2016 4:16:29 PM	B37295
Magnesium	ND	0.50	1.0		mg/L	1	9/19/2016 4:16:29 PM	B37295
Manganese	0.0039	0.00032	0.0020		mg/L	1	9/19/2016 4:16:29 PM	B37295
Potassium	0.60	0.50	1.0	J	mg/L	1	9/19/2016 4:16:29 PM	B37295
Silver	ND	0.0028	0.0050		mg/L	1	9/19/2016 4:16:29 PM	B37295
Sodium	320	2.5	5.0		mg/L	5	9/19/2016 4:22:38 PM	B37295
Zinc	ND	0.0028	0.010		mg/L	1	9/19/2016 4:16:29 PM	B37295
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.020	0.00079	0.0020		mg/L	1	9/21/2016 2:56:55 PM	27574
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 2:56:55 PM	27574
Chromium	ND	0.0027	0.0060		mg/L	1	9/21/2016 2:56:55 PM	27574
Copper	ND	0.0030	0.0060		mg/L	1	9/21/2016 2:56:55 PM	27574
Iron	0.20	0.020	0.020		mg/L	1	9/21/2016 2:56:55 PM	27574
Manganese	0.013	0.00027	0.0020		mg/L	1	9/21/2016 2:56:55 PM	27574
Silver	ND	0.0015	0.0050		mg/L	1	9/21/2016 2:56:55 PM	27574
Zinc	ND	0.0027	0.010		mg/L	1	9/21/2016 2:56:55 PM	27574
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.00067	0.00014	0.0010	J	mg/L	1	9/20/2016 3:03:56 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:03:56 PM	C37327
Selenium	0.00070	0.00021	0.0010	J	mg/L	1	9/20/2016 3:03:56 PM	C37327
Uranium	0.0050	0.000051	0.00050		mg/L	1	9/20/2016 3:03:56 PM	C37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2C

Project: 2016 Annual

Collection Date: 9/8/2016 12:25:00 PM

Lab ID: 1609451-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.00057	0.00021	0.0010	J	mg/L	1	9/20/2016 6:38:08 PM	27574
Lead	0.00017	0.000081	0.00050	J	mg/L	1	9/20/2016 6:38:08 PM	27574
Selenium	0.00025	0.00019	0.0010	J	mg/L	1	9/20/2016 6:38:08 PM	27574
Uranium	0.0047	0.00017	0.00050		mg/L	1	9/20/2016 6:38:08 PM	27574
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000058	0.000053	0.00020	J	mg/L	1	9/15/2016 1:23:27 PM	27494
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 2:50:25 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 2:50:25 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 2:50:25 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2C

Project: 2016 Annual

Collection Date: 9/8/2016 12:25:00 PM

Lab ID: 1609451-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 2:50:25 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 2:50:25 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 2:50:25 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 2:50:25 PM	R37199
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	9/14/2016 2:50:25 PM	R37199
Surr: 4-Bromofluorobenzene	94.2	0	70-130		%Rec	1	9/14/2016 2:50:25 PM	R37199
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	9/14/2016 2:50:25 PM	R37199
Surr: Toluene-d8	94.7	0	70-130		%Rec	1	9/14/2016 2:50:25 PM	R37199

EPA METHOD 8015D: GASOLINE RANGE

Analyst: DJF

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2C

Project: 2016 Annual

Collection Date: 9/8/2016 12:25:00 PM

Lab ID: 1609451-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/14/2016 2:50:25 PM	G37199
Surr: BFB	97.6	0	70-130		%Rec	1	9/14/2016 2:50:25 PM	G37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2A

Project: 2016 Annual

Collection Date: 9/8/2016 9:40:00 AM

Lab ID: 1609451-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 9:58:58 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 9:58:58 PM	27430
Surr: DNOP	112	0	77.1-144		%Rec	1	9/12/2016 9:58:58 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.98	0.050	0.10		mg/L	1	9/12/2016 11:35:30 PM	A37143
Chloride	36	1.0	10		mg/L	20	9/12/2016 11:47:55 PM	A37143
Bromide	0.42	0.044	0.10		mg/L	1	9/12/2016 11:35:30 PM	A37143
Phosphorus, Orthophosphate (As P _i)	0.94	0.076	0.50	H	mg/L	1	9/12/2016 11:35:30 PM	A37143
Sulfate	7.3	0.14	0.50		mg/L	1	9/12/2016 11:35:30 PM	A37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 1:21:26 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.15	0.0013	0.0020		mg/L	1	9/19/2016 4:35:50 PM	B37295
Cadmium	ND	0.00075	0.0020		mg/L	1	9/19/2016 4:35:50 PM	B37295
Calcium	9.0	0.50	1.0		mg/L	1	9/19/2016 4:35:50 PM	B37295
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2016 4:35:50 PM	B37295
Copper	ND	0.0040	0.0060		mg/L	1	9/19/2016 4:35:50 PM	B37295
Iron	0.37	0.020	0.020	*	mg/L	1	9/19/2016 4:35:50 PM	B37295
Magnesium	3.4	0.50	1.0		mg/L	1	9/19/2016 4:35:50 PM	B37295
Manganese	0.14	0.00032	0.0020	*	mg/L	1	9/19/2016 4:35:50 PM	B37295
Potassium	0.65	0.50	1.0	J	mg/L	1	9/19/2016 4:35:50 PM	B37295
Silver	ND	0.0028	0.0050		mg/L	1	9/19/2016 4:35:50 PM	B37295
Sodium	350	2.5	5.0		mg/L	5	9/19/2016 4:41:41 PM	B37295
Zinc	ND	0.0028	0.010		mg/L	1	9/19/2016 4:35:50 PM	B37295
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.15	0.00079	0.0020		mg/L	1	9/21/2016 3:04:50 PM	27574
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 3:04:50 PM	27574
Chromium	ND	0.0027	0.0060		mg/L	1	9/21/2016 3:04:50 PM	27574
Copper	ND	0.0030	0.0060		mg/L	1	9/21/2016 3:04:50 PM	27574
Iron	0.40	0.020	0.020	*	mg/L	1	9/21/2016 3:04:50 PM	27574
Manganese	0.14	0.00027	0.0020	*	mg/L	1	9/21/2016 3:04:50 PM	27574
Silver	ND	0.0015	0.0050		mg/L	1	9/21/2016 3:04:50 PM	27574
Zinc	ND	0.0027	0.010		mg/L	1	9/21/2016 3:04:50 PM	27574
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0079	0.00014	0.0010		mg/L	1	9/20/2016 3:07:01 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:07:01 PM	C37327
Selenium	0.0020	0.0011	0.0050	J	mg/L	5	9/21/2016 8:10:55 PM	A37386
Uranium	0.000076	0.000051	0.00050	J	mg/L	1	9/20/2016 3:07:01 PM	C37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2A

Project: 2016 Annual

Collection Date: 9/8/2016 9:40:00 AM

Lab ID: 1609451-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0072	0.00021	0.0010		mg/L	1	9/20/2016 6:41:08 PM	27574
Lead	ND	0.000081	0.00050		mg/L	1	9/20/2016 6:41:08 PM	27574
Selenium	0.0014	0.00019	0.0010		mg/L	1	9/20/2016 6:41:08 PM	27574
Uranium	ND	0.00017	0.00050		mg/L	1	9/20/2016 6:41:08 PM	27574
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000053	0.000053	0.00020	J	mg/L	1	9/15/2016 1:25:28 PM	27494
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 3:19:19 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 3:19:19 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 3:19:19 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2A

Project: 2016 Annual

Collection Date: 9/8/2016 9:40:00 AM

Lab ID: 1609451-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 3:19:19 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 3:19:19 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 3:19:19 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 3:19:19 PM	R37199
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	9/14/2016 3:19:19 PM	R37199
Surr: 4-Bromofluorobenzene	91.5	0	70-130		%Rec	1	9/14/2016 3:19:19 PM	R37199
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/14/2016 3:19:19 PM	R37199
Surr: Toluene-d8	94.5	0	70-130		%Rec	1	9/14/2016 3:19:19 PM	R37199

EPA METHOD 8015D: GASOLINE RANGE

Analyst: DJF

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2A

Project: 2016 Annual

Collection Date: 9/8/2016 9:40:00 AM

Lab ID: 1609451-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/14/2016 3:19:19 PM	G37199
Surr: BFB	93.5	0	70-130		%Rec	1	9/14/2016 3:19:19 PM	G37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2B

Project: 2016 Annual

Collection Date: 9/8/2016 10:06:00 AM

Lab ID: 1609451-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 10:26:38 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 10:26:38 PM	27430
Surr: DNOP	114	0	77.1-144		%Rec	1	9/12/2016 10:26:38 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	1.5	0.050	0.10		mg/L	1	9/13/2016 12:00:20 AM	A37143
Chloride	30	1.0	10		mg/L	20	9/13/2016 12:12:44 AM	A37143
Bromide	0.70	0.044	0.10		mg/L	1	9/13/2016 12:00:20 AM	A37143
Phosphorus, Orthophosphate (As P _i)	ND	0.076	0.50	H	mg/L	1	9/13/2016 12:00:20 AM	A37143
Sulfate	170	2.8	10		mg/L	20	9/13/2016 12:12:44 AM	A37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 1:33:50 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.040	0.0013	0.0020		mg/L	1	9/19/2016 4:47:19 PM	B37295
Cadmium	ND	0.00075	0.0020		mg/L	1	9/19/2016 4:47:19 PM	B37295
Calcium	13	0.50	1.0		mg/L	1	9/19/2016 4:47:19 PM	B37295
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2016 4:47:19 PM	B37295
Copper	ND	0.0040	0.0060		mg/L	1	9/19/2016 4:47:19 PM	B37295
Iron	0.10	0.020	0.020		mg/L	1	9/19/2016 4:47:19 PM	B37295
Magnesium	3.1	0.50	1.0		mg/L	1	9/19/2016 4:47:19 PM	B37295
Manganese	0.15	0.00032	0.0020	*	mg/L	1	9/19/2016 4:47:19 PM	B37295
Potassium	1.5	0.50	1.0		mg/L	1	9/19/2016 4:47:19 PM	B37295
Silver	ND	0.0028	0.0050		mg/L	1	9/19/2016 4:47:19 PM	B37295
Sodium	590	5.0	10		mg/L	10	9/23/2016 2:36:38 PM	B37443
Zinc	ND	0.0028	0.010		mg/L	1	9/19/2016 4:47:19 PM	B37295
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.049	0.00079	0.0020		mg/L	1	9/21/2016 3:06:51 PM	27574
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 3:06:51 PM	27574
Chromium	ND	0.0027	0.0060		mg/L	1	9/21/2016 3:06:51 PM	27574
Copper	ND	0.0030	0.0060		mg/L	1	9/21/2016 3:06:51 PM	27574
Iron	0.65	0.020	0.020	*	mg/L	1	9/21/2016 3:06:51 PM	27574
Manganese	0.15	0.00027	0.0020	*	mg/L	1	9/21/2016 3:06:51 PM	27574
Silver	ND	0.0015	0.0050		mg/L	1	9/21/2016 3:06:51 PM	27574
Zinc	ND	0.0027	0.010		mg/L	1	9/21/2016 3:06:51 PM	27574
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0017	0.00014	0.0010		mg/L	1	9/20/2016 3:10:04 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:10:04 PM	C37327
Selenium	0.0039	0.0011	0.0050	J	mg/L	5	9/21/2016 8:13:58 PM	A37386
Uranium	0.013	0.000051	0.00050		mg/L	1	9/20/2016 3:10:04 PM	C37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2B

Project: 2016 Annual

Collection Date: 9/8/2016 10:06:00 AM

Lab ID: 1609451-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0015	0.00021	0.0010		mg/L	1	9/20/2016 6:44:09 PM	27574
Lead	0.00039	0.000081	0.00050	J	mg/L	1	9/20/2016 6:44:09 PM	27574
Selenium	0.0036	0.00094	0.0050	J	mg/L	5	9/21/2016 4:51:59 PM	27574
Uranium	0.012	0.00017	0.00050		mg/L	1	9/20/2016 6:44:09 PM	27574
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	ND	0.000053	0.00020		mg/L	1	9/15/2016 1:27:30 PM	27494
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 3:47:59 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 3:47:59 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 3:47:59 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2B

Project: 2016 Annual

Collection Date: 9/8/2016 10:06:00 AM

Lab ID: 1609451-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 3:47:59 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 3:47:59 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 3:47:59 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 3:47:59 PM	R37199
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	9/14/2016 3:47:59 PM	R37199
Surr: 4-Bromofluorobenzene	93.5	0	70-130		%Rec	1	9/14/2016 3:47:59 PM	R37199
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/14/2016 3:47:59 PM	R37199
Surr: Toluene-d8	92.3	0	70-130		%Rec	1	9/14/2016 3:47:59 PM	R37199

EPA METHOD 8015D: GASOLINE RANGE

Analyst: DJF

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2B

Project: 2016 Annual

Collection Date: 9/8/2016 10:06:00 AM

Lab ID: 1609451-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/14/2016 3:47:59 PM	G37199
Surr: BFB	94.1	0	70-130		%Rec	1	9/14/2016 3:47:59 PM	G37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3B

Project: 2016 Annual

Collection Date: 9/8/2016 1:55:00 PM

Lab ID: 1609451-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 10:54:32 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 10:54:32 PM	27430
Surr: DNOP	112	0	77.1-144		%Rec	1	9/12/2016 10:54:32 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	1.2	0.050	0.10		mg/L	1	9/13/2016 12:25:09 AM	A37143
Chloride	30	1.0	10		mg/L	20	9/13/2016 12:37:33 AM	A37143
Bromide	0.41	0.044	0.10		mg/L	1	9/13/2016 12:25:09 AM	A37143
Phosphorus, Orthophosphate (As P _i)	1.3	0.076	0.50	H	mg/L	1	9/13/2016 12:25:09 AM	A37143
Sulfate	50	2.8	10		mg/L	20	9/13/2016 12:37:33 AM	A37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 1:46:15 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.10	0.0013	0.0020		mg/L	1	9/19/2016 4:51:23 PM	B37295
Cadmium	ND	0.00075	0.0020		mg/L	1	9/19/2016 4:51:23 PM	B37295
Calcium	8.4	0.50	1.0		mg/L	1	9/19/2016 4:51:23 PM	B37295
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2016 4:51:23 PM	B37295
Copper	ND	0.0040	0.0060		mg/L	1	9/19/2016 4:51:23 PM	B37295
Iron	0.41	0.020	0.020	*	mg/L	1	9/19/2016 4:51:23 PM	B37295
Magnesium	2.7	0.50	1.0		mg/L	1	9/19/2016 4:51:23 PM	B37295
Manganese	0.11	0.00032	0.0020	*	mg/L	1	9/19/2016 4:51:23 PM	B37295
Potassium	0.91	0.50	1.0	J	mg/L	1	9/19/2016 4:51:23 PM	B37295
Silver	ND	0.0028	0.0050		mg/L	1	9/19/2016 4:51:23 PM	B37295
Sodium	400	2.5	5.0		mg/L	5	9/19/2016 4:53:30 PM	B37295
Zinc	ND	0.0028	0.010		mg/L	1	9/19/2016 4:51:23 PM	B37295
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.099	0.00079	0.0020		mg/L	1	9/21/2016 3:09:02 PM	27574
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 3:09:02 PM	27574
Chromium	ND	0.0027	0.0060		mg/L	1	9/21/2016 3:09:02 PM	27574
Copper	ND	0.0030	0.0060		mg/L	1	9/21/2016 3:09:02 PM	27574
Iron	0.34	0.020	0.020	*	mg/L	1	9/21/2016 3:09:02 PM	27574
Manganese	0.078	0.00027	0.0020	*	mg/L	1	9/21/2016 3:09:02 PM	27574
Silver	ND	0.0015	0.0050		mg/L	1	9/21/2016 3:09:02 PM	27574
Zinc	ND	0.0027	0.010		mg/L	1	9/21/2016 3:09:02 PM	27574
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0059	0.00014	0.0010		mg/L	1	9/20/2016 3:13:07 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:13:07 PM	C37327
Selenium	0.0024	0.0011	0.0050	J	mg/L	5	9/21/2016 8:17:01 PM	A37386
Uranium	0.00013	0.000051	0.00050	J	mg/L	1	9/20/2016 3:13:07 PM	C37327

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3B

Project: 2016 Annual

Collection Date: 9/8/2016 1:55:00 PM

Lab ID: 1609451-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0055	0.00021	0.0010		mg/L	1	9/20/2016 6:47:09 PM	27574
Lead	0.00010	0.000081	0.00050	J	mg/L	1	9/20/2016 6:47:09 PM	27574
Selenium	0.0017	0.00019	0.0010		mg/L	1	9/20/2016 6:47:09 PM	27574
Uranium	ND	0.00017	0.00050		mg/L	1	9/20/2016 6:47:09 PM	27574
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	ND	0.000053	0.00020		mg/L	1	9/15/2016 1:29:32 PM	27494
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 4:17:01 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 4:17:01 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 4:17:01 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3B

Project: 2016 Annual

Collection Date: 9/8/2016 1:55:00 PM

Lab ID: 1609451-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 4:17:01 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 4:17:01 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 4:17:01 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 4:17:01 PM	R37199
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	9/14/2016 4:17:01 PM	R37199
Surr: 4-Bromofluorobenzene	93.6	0	70-130		%Rec	1	9/14/2016 4:17:01 PM	R37199
Surr: Dibromofluoromethane	114	0	70-130		%Rec	1	9/14/2016 4:17:01 PM	R37199
Surr: Toluene-d8	92.5	0	70-130		%Rec	1	9/14/2016 4:17:01 PM	R37199

EPA METHOD 8015D: GASOLINE RANGE

Analyst: DJF

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
	R RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3B

Project: 2016 Annual

Collection Date: 9/8/2016 1:55:00 PM

Lab ID: 1609451-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/14/2016 4:17:01 PM	G37199
Surr: BFB	95.1	0	70-130		%Rec	1	9/14/2016 4:17:01 PM	G37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3C

Project: 2016 Annual

Collection Date: 9/8/2016 1:30:00 PM

Lab ID: 1609451-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 11:22:05 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 11:22:05 PM	27430
Surr: DNOP	111	0	77.1-144		%Rec	1	9/12/2016 11:22:05 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	1.3	0.050	0.10		mg/L	1	9/13/2016 12:49:58 AM	A37143
Chloride	35	1.0	10		mg/L	20	9/13/2016 1:02:24 AM	A37143
Bromide	0.12	0.044	0.10		mg/L	1	9/13/2016 12:49:58 AM	A37143
Phosphorus, Orthophosphate (As P')	ND	0.076	0.50	H	mg/L	1	9/13/2016 12:49:58 AM	A37143
Sulfate	330	2.8	10		mg/L	20	9/13/2016 1:02:24 AM	A37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 1:58:40 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.027	0.0013	0.0020		mg/L	1	9/19/2016 5:02:35 PM	B37295
Cadmium	ND	0.00075	0.0020		mg/L	1	9/19/2016 5:02:35 PM	B37295
Calcium	3.3	0.50	1.0		mg/L	1	9/19/2016 5:02:35 PM	B37295
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2016 5:02:35 PM	B37295
Copper	ND	0.0040	0.0060		mg/L	1	9/19/2016 5:02:35 PM	B37295
Iron	0.029	0.020	0.020		mg/L	1	9/19/2016 5:02:35 PM	B37295
Magnesium	0.51	0.50	1.0	J	mg/L	1	9/19/2016 5:02:35 PM	B37295
Manganese	0.014	0.00032	0.0020		mg/L	1	9/19/2016 5:02:35 PM	B37295
Potassium	0.99	0.50	1.0	J	mg/L	1	9/19/2016 5:02:35 PM	B37295
Silver	ND	0.0028	0.0050		mg/L	1	9/19/2016 5:02:35 PM	B37295
Sodium	370	2.5	5.0		mg/L	5	9/19/2016 5:04:41 PM	B37295
Zinc	ND	0.0028	0.010		mg/L	1	9/19/2016 5:02:35 PM	B37295
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.033	0.00079	0.0020		mg/L	1	9/21/2016 3:11:11 PM	27574
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 3:11:11 PM	27574
Chromium	ND	0.0027	0.0060		mg/L	1	9/21/2016 3:11:11 PM	27574
Copper	ND	0.0030	0.0060		mg/L	1	9/21/2016 3:11:11 PM	27574
Iron	0.34	0.020	0.020	*	mg/L	1	9/21/2016 3:11:11 PM	27574
Manganese	0.021	0.00027	0.0020		mg/L	1	9/21/2016 3:11:11 PM	27574
Silver	ND	0.0015	0.0050		mg/L	1	9/21/2016 3:11:11 PM	27574
Zinc	0.0056	0.0027	0.010	J	mg/L	1	9/21/2016 3:11:11 PM	27574
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0013	0.00014	0.0010		mg/L	1	9/20/2016 3:22:22 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:22:22 PM	C37327
Selenium	0.00076	0.00021	0.0010	J	mg/L	1	9/20/2016 3:22:22 PM	C37327
Uranium	0.0015	0.000051	0.00050		mg/L	1	9/20/2016 3:22:22 PM	C37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3C

Project: 2016 Annual

Collection Date: 9/8/2016 1:30:00 PM

Lab ID: 1609451-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0013	0.00021	0.0010		mg/L	1	9/20/2016 6:56:14 PM	27574
Lead	0.00034	0.000081	0.00050	J	mg/L	1	9/20/2016 6:56:14 PM	27574
Selenium	0.00051	0.00019	0.0010	J	mg/L	1	9/20/2016 6:56:14 PM	27574
Uranium	0.0014	0.00017	0.00050		mg/L	1	9/20/2016 6:56:14 PM	27574
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000058	0.000053	0.00020	J	mg/L	1	9/15/2016 1:31:35 PM	27494
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 4:45:52 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 4:45:52 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 4:45:52 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3C

Project: 2016 Annual

Collection Date: 9/8/2016 1:30:00 PM

Lab ID: 1609451-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 4:45:52 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 4:45:52 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 4:45:52 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 4:45:52 PM	R37199
Surr: 1,2-Dichloroethane-d4	99.2	0	70-130		%Rec	1	9/14/2016 4:45:52 PM	R37199
Surr: 4-Bromofluorobenzene	92.9	0	70-130		%Rec	1	9/14/2016 4:45:52 PM	R37199
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/14/2016 4:45:52 PM	R37199
Surr: Toluene-d8	93.3	0	70-130		%Rec	1	9/14/2016 4:45:52 PM	R37199

EPA METHOD 8015D: GASOLINE RANGE

Analyst: DJF

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-3C

Project: 2016 Annual

Collection Date: 9/8/2016 1:30:00 PM

Lab ID: 1609451-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/14/2016 4:45:52 PM	G37199
Surr: BFB	93.3	0	70-130		%Rec	1	9/14/2016 4:45:52 PM	G37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 Annual

Collection Date:

Lab ID: 1609451-006

Matrix: TRIP BLANK

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 5:14:36 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 5:14:36 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 5:14:36 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 5:14:36 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 Annual

Collection Date:

Lab ID: 1609451-006

Matrix: TRIP BLANK

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 5:14:36 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 5:14:36 PM	R37199
Methylene Chloride	0.34	0.19	3.0	J	µg/L	1	9/14/2016 5:14:36 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 5:14:36 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 5:14:36 PM	R37199
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	9/14/2016 5:14:36 PM	R37199
Surr: 4-Bromofluorobenzene	92.5	0	70-130		%Rec	1	9/14/2016 5:14:36 PM	R37199
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	9/14/2016 5:14:36 PM	R37199
Surr: Toluene-d8	92.9	0	70-130		%Rec	1	9/14/2016 5:14:36 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 2016 Annual

Collection Date:

Lab ID: 1609451-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Toluene	0.12	0.12	1.0	J	µg/L	1	9/14/2016 5:43:28 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 5:43:28 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 5:43:28 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 5:43:28 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 5:43:28 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609451

Date Reported: 10/11/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 2016 Annual

Collection Date:

Lab ID: 1609451-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 5:43:28 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 5:43:28 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 5:43:28 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 5:43:28 PM	R37199
Surr: 1,2-Dichloroethane-d4	99.9	0	70-130		%Rec	1	9/14/2016 5:43:28 PM	R37199
Surr: 4-Bromofluorobenzene	94.9	0	70-130		%Rec	1	9/14/2016 5:43:28 PM	R37199
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	9/14/2016 5:43:28 PM	R37199
Surr: Toluene-d8	95.9	0	70-130		%Rec	1	9/14/2016 5:43:28 PM	R37199

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
	R	RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID MB-B	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: B37295		RunNo: 37295							
Prep Date:	Analysis Date: 9/19/2016		SeqNo: 1158025		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								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID LCS-B	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: B37295		RunNo: 37295							
Prep Date:	Analysis Date: 9/19/2016		SeqNo: 1158026		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	98.5	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.4	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.1	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.50	0.020	0.5000	0	99.5	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.48	0.0020	0.5000	0	97.0	85	115			
Potassium	50	1.0	50.00	0	99.7	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	97.8	85	115			

Sample ID LLCS-B	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: B37295		RunNo: 37295							
Prep Date:	Analysis Date: 9/19/2016		SeqNo: 1158027		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0014	0.0020	0.002000	0	70.0	50	150			J
Calcium	0.55	1.0	0.5000	0	111	50	150			J
Chromium	0.0063	0.0060	0.006000	0	104	50	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
R RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID LLLCS-B	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: B37295		RunNo: 37295							
Prep Date:	Analysis Date: 9/19/2016		SeqNo: 1158027		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0062	0.0060	0.006000	0	104	50	150			
Iron	0.025	0.020	0.02000	0	124	50	150			
Magnesium	0.55	1.0	0.5000	0	111	50	150			J
Manganese	0.0020	0.0020	0.002000	0	99.0	50	150			J
Potassium	0.58	1.0	0.5000	0	115	50	150			J
Silver	0.0052	0.0050	0.005000	0	103	50	150			
Sodium	0.55	1.0	0.5000	0	111	50	150			J
Zinc	0.0054	0.010	0.005000	0	109	50	150			J

Sample ID 1609451-001EMS	SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BW-2C	Batch ID: B37295		RunNo: 37295							
Prep Date:	Analysis Date: 9/19/2016		SeqNo: 1158532		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0.01598	96.4	70	130			
Cadmium	0.50	0.0020	0.5000	0	100	70	130			
Calcium	52	1.0	50.00	1.988	99.4	70	130			
Chromium	0.48	0.0060	0.5000	0	96.6	70	130			
Copper	0.51	0.0060	0.5000	0	101	70	130			
Iron	0.49	0.020	0.5000	0	97.8	70	130			
Magnesium	51	1.0	50.00	0	102	70	130			
Manganese	0.48	0.0020	0.5000	0.003870	95.9	70	130			
Potassium	51	1.0	50.00	0.6031	101	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Zinc	0.49	0.010	0.5000	0	98.1	70	130			

Sample ID 1609451-001EMSD	SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BW-2C	Batch ID: B37295		RunNo: 37295							
Prep Date:	Analysis Date: 9/19/2016		SeqNo: 1158533		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01598	95.8	70	130	0.629	20	
Cadmium	0.50	0.0020	0.5000	0	99.6	70	130	0.565	20	
Calcium	47	1.0	50.00	1.988	90.7	70	130	8.73	20	
Chromium	0.48	0.0060	0.5000	0	96.0	70	130	0.546	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	0.885	20	
Iron	0.49	0.020	0.5000	0	98.5	70	130	0.674	20	
Magnesium	47	1.0	50.00	0	93.0	70	130	9.29	20	
Manganese	0.48	0.0020	0.5000	0.003870	95.2	70	130	0.718	20	
Potassium	47	1.0	50.00	0.6031	93.4	70	130	7.82	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
R RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609451-001EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BW-2C		Batch ID:	B37295		RunNo:	37295				
Prep Date:			Analysis Date:	9/19/2016		SeqNo:	1158533		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.095	0.0050	0.1000	0	95.0	70	130	2.06	20		
Zinc	0.49	0.010	0.5000	0	97.8	70	130	0.335	20		

Sample ID	1609451-002EMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BW-2A		Batch ID: B37295		RunNo: 37295					
Prep Date:			Analysis Date: 9/19/2016		SeqNo: 1158541		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.61	0.0020	0.5000	0.1454	93.7	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.2	70	130			
Calcium	58	1.0	50.00	9.007	98.1	70	130			
Chromium	0.47	0.0060	0.5000	0	94.7	70	130			
Copper	0.50	0.0060	0.5000	0	99.2	70	130			
Iron	0.84	0.020	0.5000	0.3747	92.3	70	130			
Magnesium	53	1.0	50.00	3.375	99.1	70	130			
Manganese	0.60	0.0020	0.5000	0.1417	91.8	70	130			
Potassium	51	1.0	50.00	0.6548	99.8	70	130			
Silver	0.093	0.0050	0.1000	0	92.8	70	130			
Zinc	0.48	0.010	0.5000	0	95.3	70	130			

Sample ID	1609451-002EMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BW-2A		Batch ID: B37295		RunNo: 37295					
Prep Date:			Analysis Date: 9/19/2016		SeqNo: 1158542		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.62	0.0020	0.5000	0.1454	95.9	70	130	1.74	20	
Cadmium	0.50	0.0020	0.5000	0	101	70	130	3.75	20	
Calcium	59	1.0	50.00	9.007	99.8	70	130	1.39	20	
Chromium	0.49	0.0060	0.5000	0	98.2	70	130	3.64	20	
Copper	0.51	0.0060	0.5000	0	102	70	130	2.51	20	
Iron	0.85	0.020	0.5000	0.3747	94.7	70	130	1.43	20	
Magnesium	54	1.0	50.00	3.375	101	70	130	1.84	20	
Manganese	0.61	0.0020	0.5000	0.1417	93.6	70	130	1.46	20	
Potassium	52	1.0	50.00	0.6548	102	70	130	2.12	20	
Silver	0.096	0.0050	0.1000	0	96.3	70	130	3.78	20	
Zinc	0.49	0.010	0.5000	0	97.0	70	130	1.81	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
R RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID MB-B	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: PBW	Batch ID: B37443			RunNo: 37443						
Prep Date:	Analysis Date: 9/23/2016			SeqNo: 1164053		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: B37443			RunNo: 37443						
Prep Date:	Analysis Date: 9/23/2016			SeqNo: 1164054		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Sample ID LLCS-B	SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: BatchQC	Batch ID: B37443			RunNo: 37443						
Prep Date:	Analysis Date: 9/23/2016			SeqNo: 1164055		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.56	1.0	0.5000	0	112	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
R RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27574		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	27574		RunNo:	37369			
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161346	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								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-27574		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	27574		RunNo:	37369			
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161347	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	97.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Copper	0.48	0.0060	0.5000	0	95.7	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.9	85	115			
Silver	0.091	0.0050	0.1000	0	91.1	85	115			
Zinc	0.48	0.010	0.5000	0	95.5	85	115			

Sample ID	LLCS-27574		SampType:	LCSLL		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	27574		RunNo:	37369			
Prep Date:	9/19/2016		Analysis Date:	9/21/2016		SeqNo:	1161348	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Cadmium	0.0015	0.0020	0.002000	0	76.5	50	150			J
Chromium	0.0069	0.0060	0.006000	0	115	50	150			
Copper	0.0060	0.0060	0.006000	0	100	50	150			
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0049	0.0050	0.005000	0	98.8	50	150			J
Zinc	0.0052	0.010	0.005000	0	104	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
R RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609446-02AMSDLL				SampType:	MSD		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	BatchQC				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160730	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.0001542	98.6	70	130	3.20	20		
Lead	0.013	0.00050	0.01250	0.0005561	99.9	70	130	0.672	20		
Selenium	0.026	0.0010	0.02500	0.001529	99.7	70	130	5.30	20		
Uranium	0.015	0.00050	0.01250	0.001591	103	70	130	0.746	20		

Sample ID	LCS				SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	LCSW				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160759	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	91.8	85	115				
Lead	0.012	0.00050	0.01250	0	95.4	85	115				
Selenium	0.023	0.0010	0.02500	0	92.7	85	115				
Uranium	0.012	0.00050	0.01250	0	96.1	85	115				

Sample ID	LLLCS				SampType:	LCSLL		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	BatchQC				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160761	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.00097	0.0010	0.001000	0	96.9	50	150			J	
Lead	0.00051	0.00050	0.0005000	0	102	50	150				
Selenium	0.00094	0.0010	0.001000	0	93.5	50	150			J	
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J	

Sample ID	MB				SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	PBW				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160763	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	LCS				SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	LCSW				Batch ID:	A37386		RunNo:	37386		
Prep Date:					Analysis Date:	9/21/2016		SeqNo:	1162017	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 |
| R RPD outside accepted recovery limits | 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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: A37386		RunNo: 37386					
Prep Date:			Analysis Date: 9/21/2016		SeqNo: 1162017		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	97.7	85	115			

Sample ID	LLCS		SampType: LCSLL		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: A37386		RunNo: 37386					
Prep Date:			Analysis Date: 9/21/2016		SeqNo: 1162020		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0010	0.0010	0.001000	0	102	50	150			

Sample ID	MB	SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	PBW	Batch ID:	A37386		RunNo:	37386				
Prep Date:		Analysis Date:	9/21/2016		SeqNo:	1162022	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27574		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	27574		RunNo:	37355			
Prep Date:	9/19/2016		Analysis Date:	9/20/2016		SeqNo:	1160661	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	MSLCS-27574		SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW		Batch ID:	27574		RunNo:	37355			
Prep Date:	9/19/2016		Analysis Date:	9/20/2016		SeqNo:	1160663	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	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.0	85	115			
Uranium	0.012	0.00050	0.01250	0	99.9	85	115			

Sample ID	MSLLLCS-27574		SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	BatchQC		Batch ID:	27574		RunNo:	37355			
Prep Date:	9/19/2016		Analysis Date:	9/20/2016		SeqNo:	1160665	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	95.2	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.8	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.2	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.0	50	150			J

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27494		SampType:	MBLK		TestCode:	EPA Method 245.1: Mercury				
Client ID:	PBW		Batch ID:	27494		RunNo:	37231				
Prep Date:	9/14/2016		Analysis Date:	9/15/2016		SeqNo:	1155489		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	ND	0.00020									

Sample ID	LCS-27494			SampType:	LCS		TestCode:	EPA Method 245.1: Mercury			
Client ID:	LCSW			Batch ID:	27494		RunNo:	37231			
Prep Date:	9/14/2016			Analysis Date:	9/15/2016		SeqNo:	1155490		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0050	0.00020	0.005000	0	99.4	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
R	RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: A37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151882		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: A37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151883		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.3	90	110			
Chloride	4.5	0.50	5.000	0	90.3	90	110			
Bromide	2.3	0.10	2.500	0	91.1	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.2	90	110			
Sulfate	9.1	0.50	10.00	0	91.0	90	110			

Sample ID 1609451-001DMS	SampType: MS		TestCode: EPA Method 300.0: Anions							
Client ID: BW-2C	Batch ID: A37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151888		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.3	0.10	0.5000	1.850	86.5	74.5	121			
Bromide	2.5	0.10	2.500	0.09820	96.8	74.6	115			

Sample ID 1609451-001DMSD	SampType: MSD		TestCode: EPA Method 300.0: Anions							
Client ID: BW-2C	Batch ID: A37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151889		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.3	0.10	0.5000	1.850	87.2	74.5	121	0.166	20	
Bromide	2.5	0.10	2.500	0.09820	96.9	74.6	115	0.155	20	

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R37294		RunNo: 37294							
Prep Date:	Analysis Date: 9/17/2016		SeqNo: 1157953		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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 |
| R RPD outside accepted recovery limits | 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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LCS	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R37294	RunNo:	37294					
Prep Date:		Analysis Date:	9/17/2016	SeqNo:	1157954	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.7	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
R	RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LCS-27430		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 27430		RunNo: 37116					
Prep Date:	9/12/2016		Analysis Date: 9/12/2016		SeqNo: 1151166		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	121	63.2	155			
Surr: DNOP	0.55		0.5000		111	77.1	144			

Sample ID	MB-27430	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW	Batch ID: 27430			RunNo: 37116					
Prep Date:	9/12/2016	Analysis Date: 9/12/2016			SeqNo: 1151167		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	1.1		1.000		108	77.1	144			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R37199	RunNo:	37199					
Prep Date:		Analysis Date:	9/14/2016	SeqNo:	1154193	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	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	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.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID rb	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES					
Client ID: PBW	Batch ID: R37199				RunNo: 37199					
Prep Date:	Analysis Date: 9/14/2016				SeqNo: 1154193	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	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID 100ng lcsb	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW	Batch ID: R37199				RunNo: 37199					
Prep Date:	Analysis Date: 9/14/2016				SeqNo: 1154194	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	19	1.0	20.00	0	95.8	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
R RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	100ng lcsb	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R37199			RunNo: 37199					
Prep Date:		Analysis Date: 9/14/2016			SeqNo: 1154194		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		95.5	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
R RPD outside accepted recovery limits	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#: 1609451

11-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	G37199	RunNo:	37199					
Prep Date:		Analysis Date:	9/14/2016	SeqNo:	1154472	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	9.4		10.00		94.1	70	130			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	G37199	RunNo:	37199					
Prep Date:		Analysis Date:	9/14/2016	SeqNo:	1154473	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	75.4	118			
Surr: BFB	10		10.00		100	70	130			

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
R RPD outside accepted recovery limits
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

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1609451**

RcptNo: **1**

Received by/date:

AG

09/08/16

Logged By:

Ashley Gallegos

9/8/2016 5:10:00 PM

Completed By:

Ashley Gallegos

9/9/2016 12:17:48 PM

Reviewed By:

JC 09/09/16

AG
AG

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

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

of preserved
bottles checked
for pH:

15

($\leq$ or >12 unless noted)

Adjusted?

NO

Checked by:

aj

Special Handling (if applicable)

16. 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:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



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

October 21, 2016

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2016 Annual/Quarterly

OrderNo.: 1609503

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/10/2016 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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609503

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 2016 Annual/Quarterly

Collection Date: 9/9/2016 2:35:00 PM

Lab ID: 1609503-001

Matrix: AQUEOUS

Received Date: 9/10/2016 9:00:00 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	0.69	1.0		mg/L	1	9/12/2016 7:32:44 PM	27435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 7:32:44 PM	27435
Surr: DNOP	138	0	77.1-144		%Rec	1	9/12/2016 7:32:44 PM	27435
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	1.6	0.050	0.10		mg/L	1	9/12/2016 9:31:24 PM	R37143
Chloride	100	1.0	10		mg/L	20	9/12/2016 9:43:48 PM	R37143
Bromide	0.33	0.044	0.10		mg/L	1	9/12/2016 9:31:24 PM	R37143
Phosphorus, Orthophosphate (As P ³⁻)	ND	1.5	10	H	mg/L	20	9/12/2016 9:43:48 PM	R37143
Sulfate	900	2.8	10		mg/L	20	9/12/2016 9:43:48 PM	R37143
Nitrate+Nitrite as N	1.7	0.46	1.0		mg/L	5	9/17/2016 6:19:18 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS	
Barium	0.0087	0.0013	0.0020		mg/L	1	9/29/2016 2:31:18 PM	E37552
Cadmium	ND	0.00075	0.0020		mg/L	1	9/29/2016 2:31:18 PM	E37552
Calcium	9.8	0.50	1.0		mg/L	1	9/29/2016 2:31:18 PM	E37552
Chromium	ND	0.0018	0.0060		mg/L	1	9/29/2016 2:31:18 PM	E37552
Copper	ND	0.0040	0.0060		mg/L	1	9/29/2016 2:31:18 PM	E37552
Iron	ND	0.020	0.020		mg/L	1	9/29/2016 2:31:18 PM	E37552
Magnesium	1.2	0.50	1.0		mg/L	1	9/29/2016 2:31:18 PM	E37552
Manganese	0.015	0.00032	0.0020		mg/L	1	9/29/2016 2:31:18 PM	E37552
Potassium	1.6	0.50	1.0		mg/L	1	9/29/2016 2:31:18 PM	E37552
Silver	ND	0.0028	0.0050		mg/L	1	9/29/2016 2:31:18 PM	E37552
Sodium	620	5.0	10		mg/L	10	9/29/2016 2:33:22 PM	E37552
Zinc	0.0091	0.0028	0.010	J	mg/L	1	9/29/2016 2:31:18 PM	E37552
EPA METHOD 200.7: TOTAL METALS							Analyst: ELS	
Barium	0.0080	0.00079	0.0020		mg/L	1	9/29/2016 12:53:15 PM	27675
Cadmium	ND	0.0015	0.0020		mg/L	1	9/29/2016 12:53:15 PM	27675
Chromium	ND	0.0027	0.0060		mg/L	1	9/29/2016 12:53:15 PM	27675
Copper	ND	0.0030	0.0060		mg/L	1	9/29/2016 12:53:15 PM	27675
Iron	ND	0.020	0.020		mg/L	1	9/29/2016 12:53:15 PM	27675
Manganese	0.016	0.00027	0.0020		mg/L	1	9/29/2016 12:53:15 PM	27675
Silver	ND	0.0015	0.0050		mg/L	1	10/13/2016 1:08:18 PM	28020
Zinc	ND	0.0027	0.010		mg/L	1	9/29/2016 12:53:15 PM	27675
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0021	0.00069	0.0050	J	mg/L	5	9/22/2016 8:40:18 PM	B37425
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2016 10:16:24 PM	B37386
Selenium	0.0081	0.00021	0.0010		mg/L	1	9/21/2016 10:16:24 PM	B37386
Uranium	0.18	0.0010	0.010	*	mg/L	20	9/22/2016 8:55:43 PM	B37425

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609503

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 2016 Annual/Quarterly

Collection Date: 9/9/2016 2:35:00 PM

Lab ID: 1609503-001

Matrix: AQUEOUS

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0023	0.0011	0.0050	J	mg/L	5	9/26/2016 4:58:55 PM	27675
Lead	ND	0.000081	0.00050		mg/L	1	9/26/2016 1:23:22 PM	27675
Selenium	0.0074	0.00094	0.0050		mg/L	5	9/26/2016 4:58:55 PM	27675
Uranium	0.18	0.0035	0.010	*	mg/L	20	9/26/2016 6:52:44 PM	27675
EPA METHOD 245.1: MERCURY							Analyst: pmf	
Mercury	0.000095	0.000053	0.00020	J	mg/L	1	9/20/2016 3:00:24 PM	27587
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Toluene	ND	0.12	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Naphthalene	ND	0.093	2.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Acetone	ND	4.9	10		µg/L	1	9/14/2016 6:12:22 PM	R37199
Bromobenzene	ND	0.098	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Bromoform	ND	0.10	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Bromomethane	ND	0.78	3.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
2-Butanone	ND	0.74	10		µg/L	1	9/14/2016 6:12:22 PM	R37199
Carbon disulfide	ND	0.60	10		µg/L	1	9/14/2016 6:12:22 PM	R37199
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Chloroethane	ND	0.19	2.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Chloroform	ND	0.089	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Chloromethane	ND	0.21	3.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Dibromomethane	ND	0.12	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609503

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 2016 Annual/Quarterly

Collection Date: 9/9/2016 2:35:00 PM

Lab ID: 1609503-001

Matrix: AQUEOUS

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
2-Hexanone	ND	0.84	10		µg/L	1	9/14/2016 6:12:22 PM	R37199
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/14/2016 6:12:22 PM	R37199
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Styrene	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/14/2016 6:12:22 PM	R37199
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/14/2016 6:12:22 PM	R37199
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	9/14/2016 6:12:22 PM	R37199
Surr: 4-Bromofluorobenzene	93.5	0	70-130		%Rec	1	9/14/2016 6:12:22 PM	R37199
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	9/14/2016 6:12:22 PM	R37199
Surr: Toluene-d8	93.7	0	70-130		%Rec	1	9/14/2016 6:12:22 PM	R37199

EPA METHOD 8015D: GASOLINE RANGE

Analyst: DJF

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609503

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 2016 Annual/Quarterly

Collection Date: 9/9/2016 2:35:00 PM

Lab ID: 1609503-001

Matrix: AQUEOUS

Received Date: 9/10/2016 9:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/14/2016 6:12:22 PM	G37199
Surr: BFB	93.2	0	70-130		%Rec	1	9/14/2016 6:12:22 PM	G37199

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
	R	RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID MB-E	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: E37552		RunNo: 37552							
Prep Date:	Analysis Date: 9/29/2016		SeqNo: 1169123		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								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID LCS-E	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: E37552		RunNo: 37552							
Prep Date:	Analysis Date: 9/29/2016		SeqNo: 1169127		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.9	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.5	85	115			
Chromium	0.49	0.0060	0.5000	0	98.0	85	115			
Copper	0.50	0.0060	0.5000	0	99.5	85	115			
Iron	0.50	0.020	0.5000	0	99.8	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	99.4	85	115			
Potassium	49	1.0	50.00	0	97.3	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	49	1.0	50.00	0	98.6	85	115			
Zinc	0.49	0.010	0.5000	0	97.6	85	115			

Sample ID LLCS-E	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: E37552		RunNo: 37552							
Prep Date:	Analysis Date: 9/29/2016		SeqNo: 1169128		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	91.0	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	103	50	150			
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0064	0.0060	0.006000	0	107	50	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
R RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	LLLCS-E		SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: E37552		RunNo: 37552					
Prep Date:			Analysis Date: 9/29/2016		SeqNo: 1169128		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0081	0.0060	0.006000	0	135	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Magnesium	0.52	1.0	0.5000	0	105	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.53	1.0	0.5000	0	105	50	150			J
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Sodium	0.50	1.0	0.5000	0	100	50	150			J
Zinc	0.0050	0.010	0.005000	0	101	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
R	RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	MB-27675		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	27675		RunNo:	37552			
Prep Date:	9/23/2016		Analysis Date:	9/29/2016		SeqNo:	1168528	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								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-27675		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	27675		RunNo:	37552			
Prep Date:	9/23/2016		Analysis Date:	9/29/2016		SeqNo:	1168529	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.49	0.0060	0.5000	0	98.8	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.48	0.020	0.5000	0	95.6	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Zinc	0.49	0.010	0.5000	0	97.8	85	115			

Sample ID	LLLCS-27675		SampType:	LCSLL		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	27675		RunNo:	37552			
Prep Date:	9/23/2016		Analysis Date:	9/29/2016		SeqNo:	1168530	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0015	0.0020	0.002000	0	74.5	50	150			J
Cadmium	0.0024	0.0020	0.002000	0	120	50	150			
Chromium	0.0057	0.0060	0.006000	0	94.7	50	150			J
Copper	0.0048	0.0060	0.006000	0	80.8	50	150			J
Manganese	0.0023	0.0020	0.002000	0	115	50	150			
Zinc	0.0054	0.010	0.005000	0	108	50	150			J

Sample ID	LLLCS-27675		SampType:	LCSLL		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	27675		RunNo:	37552			
Prep Date:	9/23/2016		Analysis Date:	9/29/2016		SeqNo:	1168534	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.019	0.020	0.02000	0	92.7	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
R RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	1609503-001EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-11		Batch ID:	27675		RunNo:	37552			
Prep Date:	9/23/2016		Analysis Date:	9/29/2016		SeqNo:	1169153		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.008030	101	70	130			
Cadmium	0.52	0.0020	0.5000	0	104	70	130			
Chromium	0.48	0.0060	0.5000	0	96.9	70	130			
Copper	0.54	0.0060	0.5000	0	107	70	130			
Iron	0.49	0.020	0.5000	0	98.9	70	130			
Manganese	0.52	0.0020	0.5000	0.01612	100	70	130			
Zinc	0.49	0.010	0.5000	0	98.7	70	130			

Sample ID	1609503-001EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-11		Batch ID:	27675		RunNo:	37552			
Prep Date:	9/23/2016		Analysis Date:	9/29/2016		SeqNo:	1169154		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0.008030	98.7	70	130	2.07	20	
Cadmium	0.52	0.0020	0.5000	0	103	70	130	0.576	20	
Chromium	0.48	0.0060	0.5000	0	96.1	70	130	0.846	20	
Copper	0.53	0.0060	0.5000	0	107	70	130	0.700	20	
Iron	0.50	0.020	0.5000	0	99.5	70	130	0.613	20	
Manganese	0.51	0.0020	0.5000	0.01612	98.9	70	130	1.10	20	
Zinc	0.49	0.010	0.5000	0	98.4	70	130	0.290	20	

Sample ID	1609503-001EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-11		Batch ID:	28020		RunNo:	37932			
Prep Date:	10/12/2016		Analysis Date:	10/13/2016		SeqNo:	1181980		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.092	0.0050	0.1000	0	92.3	70	130			

Sample ID	1609503-001EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-11		Batch ID:	28020		RunNo:	37932			
Prep Date:	10/12/2016		Analysis Date:	10/13/2016		SeqNo:	1181981		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.089	0.0050	0.1000	0	89.2	70	130	3.46	20	

Sample ID	MB-28020		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	28020		RunNo:	37932			
Prep Date:	10/12/2016		Analysis Date:	10/13/2016		SeqNo:	1182663		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 |
| R RPD outside accepted recovery limits | 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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	MB-28020		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 28020		RunNo: 37932					
Prep Date:	10/12/2016		Analysis Date: 10/13/2016		SeqNo: 1182663		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	LCS-28020			SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW			Batch ID:	28020		RunNo:	37932			
Prep Date:	10/12/2016			Analysis Date:	10/13/2016		SeqNo:	1182664		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.096	0.0050	0.1000	0	95.6	85	115				

Sample ID	LLLCS-28020		SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 28020		RunNo: 37932					
Prep Date:	10/12/2016		Analysis Date: 10/13/2016		SeqNo: 1182665		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0042	0.0050	0.005000	0	85.0	50	150			J

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	1609503-001DMSDL			SampType:	MSD		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	OW-11		Batch ID:	B37386		RunNo:	37386				
Prep Date:			Analysis Date:	9/21/2016		SeqNo:	1161970		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.013	0.00050	0.01250	0	105	70	130	0.738	20		
Selenium	0.033	0.0010	0.02500	0.008100	101	70	130	0.197	20		

Sample ID	1609503-001DMSLL			SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	OW-11		Batch ID:	B37386		RunNo:	37386				
Prep Date:			Analysis Date:	9/21/2016		SeqNo:	1161971		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.013	0.00050	0.01250	0	106	70	130				
Selenium	0.033	0.0010	0.02500	0.008100	101	70	130				

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: B37386		RunNo: 37386					
Prep Date:			Analysis Date: 9/21/2016		SeqNo: 1162018		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	97.0	85	115			
Selenium	0.025	0.0010	0.02500	0	99.9	85	115			

Sample ID	LLLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC	Batch ID: B37386			RunNo: 37386					
Prep Date:		Analysis Date: 9/21/2016			SeqNo: 1162021		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00050	0.00050	0.0005000	0	100	50	150			
Selenium	0.00098	0.0010	0.001000	0	97.5	50	150			J

Sample ID	MB	SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	PBW	Batch ID:	B37386		RunNo:	37386				
Prep Date:		Analysis Date:	9/21/2016		SeqNo:	1162023	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	1609503-001DMSDL				SampType:	MSD		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	OW-11		Batch ID:	B37425		RunNo:	37425				
Prep Date:			Analysis Date:	9/22/2016		SeqNo:	1163294		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

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

R RPD outside accepted recovery limits

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup
Project: 2016 Annual/Quarterly

Sample ID	1609503-001DMSDL				SampType:	MSD		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	OW-11				Batch ID:	B37425		RunNo:	37425		
Prep Date:					Analysis Date:	9/22/2016		SeqNo:	1163294	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.12	0.0050	0.1250	0.002137	91.3	70	130	1.25	20		

Sample ID	1609503-001DMSLL				SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	OW-11				Batch ID:	B37425		RunNo:	37425		
Prep Date:					Analysis Date:	9/22/2016		SeqNo:	1163295	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.12	0.0050	0.1250	0.002137	92.5	70	130				

Sample ID	LCS				SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	LCSW				Batch ID:	B37425		RunNo:	37425		
Prep Date:					Analysis Date:	9/22/2016		SeqNo:	1163315	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	90.1	85	115				
Uranium	0.011	0.00050	0.01250	0	90.9	85	115				

Sample ID	LLLCS				SampType:	LCSLL		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	BatchQC				Batch ID:	B37425		RunNo:	37425		
Prep Date:					Analysis Date:	9/22/2016		SeqNo:	1163316	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.00091	0.0010	0.001000	0	91.5	50	150			J	
Uranium	0.00048	0.00050	0.0005000	0	95.7	50	150			J	

Sample ID	MB				SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	PBW				Batch ID:	B37425		RunNo:	37425		
Prep Date:					Analysis Date:	9/22/2016		SeqNo:	1163317	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	ND	0.0010									
Uranium	ND	0.00050									

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
R RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	MB-27675		SampType: MBLK		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	PBW		Batch ID: 27675		RunNo: 37474					
Prep Date:	9/23/2016		Analysis Date: 9/26/2016		SeqNo: 1165266		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	MSLCS-27675		SampType: LCS		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	LCSW		Batch ID: 27675		RunNo: 37474					
Prep Date:	9/23/2016		Analysis Date: 9/26/2016		SeqNo: 1165268		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	98.0	85	115			
Lead	0.013	0.00050	0.01250	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID	MSLL LCS-27675		SampType: LCSLL		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	BatchQC		Batch ID: 27675		RunNo: 37474					
Prep Date:	9/23/2016		Analysis Date: 9/26/2016		SeqNo: 1165270		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	98.4	50	150			J
Lead	0.00053	0.00050	0.0005000	0	105	50	150			
Selenium	0.0010	0.0010	0.001000	0	101	50	150			
Uranium	0.00046	0.00050	0.0005000	0	91.8	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
R	RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	MB-27587		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 27587		RunNo: 37346					
Prep Date:	9/19/2016		Analysis Date: 9/20/2016		SeqNo: 1160133		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	0.000093	0.00020								J

Sample ID	LCS-27587		SampType: LCS		TestCode: EPA Method 245.1: Mercury					
Client ID:	LCSW		Batch ID: 27587		RunNo: 37346					
Prep Date:	9/19/2016		Analysis Date: 9/20/2016		SeqNo: 1160134		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	97.0	80	120			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R37143			RunNo: 37143						
Prep Date:	Analysis Date: 9/12/2016			SeqNo: 1151827			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: R37143			RunNo: 37143						
Prep Date:	Analysis Date: 9/12/2016			SeqNo: 1151828			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	104	90	110			
Chloride	4.8	0.50	5.000	0	96.3	90	110			
Bromide	2.4	0.10	2.500	0	97.2	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	99.0	90	110			
Sulfate	9.8	0.50	10.00	0	97.8	90	110			

Sample ID MB	SampType: mblk			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R37294			RunNo: 37294						
Prep Date:	Analysis Date: 9/17/2016			SeqNo: 1157953			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: lcs			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: R37294			RunNo: 37294						
Prep Date:	Analysis Date: 9/17/2016			SeqNo: 1157954			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.7	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
R RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	LCS-27435		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 27435		RunNo: 37115					
Prep Date:	9/12/2016		Analysis Date: 9/12/2016		SeqNo: 1151345		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	111	63.2	155			
Surr: DNOP	0.59		0.5000		119	77.1	144			

Sample ID	MB-27435		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW		Batch ID: 27435		RunNo: 37115					
Prep Date:	9/12/2016		Analysis Date: 9/12/2016		SeqNo: 1151346		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	1.3		1.000		127	77.1	144			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R37199			RunNo: 37199					
Prep Date:		Analysis Date: 9/14/2016			SeqNo: 1154193	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	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	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.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	rb	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID: R37199				RunNo: 37199				
Prep Date:		Analysis Date: 9/14/2016				SeqNo: 1154193	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	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID	100ng lcsb	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES				
Client ID:	LCSW	Batch ID: R37199				RunNo: 37199				
Prep Date:		Analysis Date: 9/14/2016				SeqNo: 1154194	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	19	1.0	20.00	0	95.8	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
R	RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	100ng lcsb	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R37199			RunNo: 37199					
Prep Date:		Analysis Date: 9/14/2016			SeqNo: 1154194		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		95.5	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
R	RPD outside accepted recovery limits	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#: 1609503

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual/Quarterly

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	G37199	RunNo:	37199					
Prep Date:		Analysis Date:	9/14/2016	SeqNo:	1154472	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	9.4		10.00		94.1	70	130			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	G37199	RunNo:	37199					
Prep Date:		Analysis Date:	9/14/2016	SeqNo:	1154473	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	75.4	118			
Surr: BFB	10		10.00		100	70	130			

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
R RPD outside accepted recovery limits
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

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1609503

RcptNo: 1

Received by/date:

Logged By:

Ashley Gallegos

9/10/2016 9:00:00 AM

Completed By:

Ashley Gallegos

9/12/2016 9:45:05 AM

Reviewed By:

AG/AT

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of >0° C to 6.0° C

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☒

No ☐

No VOA Vials ☐

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

13. Are matrices correctly identified on Chain of Custody?

Yes ☒

No ☐

14. Is it clear what analyses were requested?

Yes ☒

No ☐

15. Were all holding times able to be met?

Yes ☒

No ☐

(If no, notify customer for authorization.)

of preserved bottles checked for pH: 3
(≤2 or >12 unless noted)
Adjusted? No
Checked by: AS

Special Handling (if applicable)

16. 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:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10	Good	Yes			



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

October 25, 2016

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2016 3RD QTR (OW)

OrderNo.: 1609A26

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/18/2016 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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-55

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 10:15:00 AM

Lab ID: 1609A26-001

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	5.3	0.69	1.0		mg/L	1	9/20/2016 4:37:12 PM	27591
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2016 4:37:12 PM	27591
Surr: DNOP	120	0	77.1-144		%Rec	1	9/20/2016 4:37:12 PM	27591
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.60	0.0013	0.0020		mg/L	1	10/13/2016 1:51:09 PM	C37932
Cadmium	ND	0.00075	0.0020		mg/L	1	10/13/2016 1:51:09 PM	C37932
Chromium	ND	0.0018	0.0060		mg/L	1	10/13/2016 1:51:09 PM	C37932
Copper	ND	0.0040	0.0060		mg/L	1	10/13/2016 1:51:09 PM	C37932
Iron	3.8	0.10	0.10	*	mg/L	5	10/13/2016 1:52:52 PM	C37932
Manganese	4.1	0.0016	0.010	*	mg/L	5	10/13/2016 1:52:52 PM	C37932
Silver	ND	0.0028	0.0050		mg/L	1	10/13/2016 1:51:09 PM	C37932
Zinc	0.0035	0.0028	0.010	J	mg/L	1	10/13/2016 1:51:09 PM	C37932
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	1.2	0.0040	0.010		mg/L	5	10/6/2016 5:44:15 PM	27884
Cadmium	ND	0.0015	0.0020		mg/L	1	10/5/2016 5:59:53 PM	27884
Chromium	0.0090	0.0027	0.0060		mg/L	1	10/5/2016 5:59:53 PM	27884
Copper	0.0094	0.0030	0.0060		mg/L	1	10/5/2016 5:59:53 PM	27884
Iron	13	0.40	0.40	*	mg/L	20	10/6/2016 5:51:54 PM	27884
Manganese	5.2	0.0055	0.040	*	mg/L	20	10/6/2016 5:51:54 PM	27884
Silver	ND	0.0015	0.0050		mg/L	1	10/6/2016 5:31:05 PM	27884
Zinc	0.066	0.0027	0.010		mg/L	1	10/5/2016 5:59:53 PM	27884
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0074	0.00014	0.0010		mg/L	1	9/30/2016 4:41:19 PM	C37623
Lead	0.00022	0.00017	0.00050	J	mg/L	1	9/30/2016 4:41:19 PM	C37623
Selenium	0.0082	0.00021	0.0010		mg/L	1	9/30/2016 4:41:19 PM	C37623
Uranium	0.0074	0.000051	0.00050		mg/L	1	9/30/2016 4:41:19 PM	C37623
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0078	0.0011	0.0050		mg/L	5	10/6/2016 6:07:55 PM	27884
Lead	0.024	0.000081	0.00050	*	mg/L	1	10/6/2016 5:52:48 PM	27884
Selenium	0.0038	0.00094	0.0050	J	mg/L	5	10/6/2016 6:07:55 PM	27884
Uranium	0.0094	0.00017	0.00050		mg/L	1	10/6/2016 5:52:48 PM	27884
EPA METHOD 245.1: MERCURY							Analyst: pmf	
Mercury	0.00011	0.000053	0.00020	J	mg/L	1	9/29/2016 1:28:58 PM	27776
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	12000	96	1000		µg/L	1000	9/22/2016 4:37:39 PM	W37409
Toluene	4600	120	1000		µg/L	1000	9/22/2016 4:37:39 PM	W37409

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-55

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 10:15:00 AM

Lab ID: 1609A26-001

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Ethylbenzene	950	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Methyl tert-butyl ether (MTBE)	1200	2.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2,4-Trimethylbenzene	880	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,3,5-Trimethylbenzene	280	1.2	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2-Dichloroethane (EDC)	5.6	1.2	10	J	µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2-Dibromoethane (EDB)	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Naphthalene	120	0.93	20		µg/L	10	9/21/2016 4:44:20 PM	R37365
1-Methylnaphthalene	30	2.0	40	J	µg/L	10	9/21/2016 4:44:20 PM	R37365
2-Methylnaphthalene	45	1.6	40		µg/L	10	9/21/2016 4:44:20 PM	R37365
Acetone	ND	49	100		µg/L	10	9/21/2016 4:44:20 PM	R37365
Bromobenzene	ND	0.98	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Bromodichloromethane	ND	1.4	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Bromoform	ND	1.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Bromomethane	ND	7.8	30		µg/L	10	9/21/2016 4:44:20 PM	R37365
2-Butanone	ND	7.4	100		µg/L	10	9/21/2016 4:44:20 PM	R37365
Carbon disulfide	ND	6.0	100		µg/L	10	9/21/2016 4:44:20 PM	R37365
Carbon Tetrachloride	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Chlorobenzene	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Chloroethane	ND	1.9	20		µg/L	10	9/21/2016 4:44:20 PM	R37365
Chloroform	ND	0.89	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Chloromethane	ND	2.1	30		µg/L	10	9/21/2016 4:44:20 PM	R37365
2-Chlorotoluene	ND	4.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
4-Chlorotoluene	ND	1.3	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
cis-1,2-DCE	ND	1.2	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
cis-1,3-Dichloropropene	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2-Dibromo-3-chloropropane	ND	2.3	20		µg/L	10	9/21/2016 4:44:20 PM	R37365
Dibromochloromethane	ND	0.87	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Dibromomethane	ND	1.2	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2-Dichlorobenzene	ND	4.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,3-Dichlorobenzene	ND	1.4	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,4-Dichlorobenzene	ND	1.4	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Dichlorodifluoromethane	ND	3.6	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,1-Dichloroethane	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,1-Dichloroethene	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2-Dichloropropane	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,3-Dichloropropane	ND	1.6	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
2,2-Dichloropropane	ND	1.7	20		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,1-Dichloropropene	ND	1.3	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Hexachlorobutadiene	ND	2.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-55

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 10:15:00 AM

Lab ID: 1609A26-001

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
2-Hexanone	ND	8.4	100		µg/L	10	9/21/2016 4:44:20 PM	R37365
Isopropylbenzene	35	1.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
4-Isopropyltoluene	5.9	1.4	10	J	µg/L	10	9/21/2016 4:44:20 PM	R37365
4-Methyl-2-pentanone	ND	4.3	100		µg/L	10	9/21/2016 4:44:20 PM	R37365
Methylene Chloride	ND	1.9	30		µg/L	10	9/21/2016 4:44:20 PM	R37365
n-Butylbenzene	17	1.6	30	J	µg/L	10	9/21/2016 4:44:20 PM	R37365
n-Propylbenzene	120	1.3	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
sec-Butylbenzene	9.3	1.2	10	J	µg/L	10	9/21/2016 4:44:20 PM	R37365
Styrene	4.1	1.1	10	J	µg/L	10	9/21/2016 4:44:20 PM	R37365
tert-Butylbenzene	ND	1.2	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,1,1,2-Tetrachloroethane	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,1,2,2-Tetrachloroethane	ND	1.3	20		µg/L	10	9/21/2016 4:44:20 PM	R37365
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
trans-1,2-DCE	ND	4.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
trans-1,3-Dichloropropene	ND	1.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2,3-Trichlorobenzene	ND	1.1	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2,4-Trichlorobenzene	ND	1.3	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,1,1-Trichloroethane	ND	0.91	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,1,2-Trichloroethane	ND	1.3	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Trichloroethene (TCE)	ND	1.8	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Trichlorofluoromethane	ND	2.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
1,2,3-Trichloropropane	ND	2.0	20		µg/L	10	9/21/2016 4:44:20 PM	R37365
Vinyl chloride	ND	2.0	10		µg/L	10	9/21/2016 4:44:20 PM	R37365
Xylenes, Total	4500	370	1500		µg/L	1000	9/22/2016 4:37:39 PM	W37409
Surr: 1,2-Dichloroethane-d4	89.7	0	70-130		%Rec	10	9/21/2016 4:44:20 PM	R37365
Surr: 4-Bromofluorobenzene	77.6	0	70-130		%Rec	10	9/21/2016 4:44:20 PM	R37365
Surr: Dibromofluoromethane	82.8	0	70-130		%Rec	10	9/21/2016 4:44:20 PM	R37365
Surr: Toluene-d8	93.9	0	70-130		%Rec	10	9/21/2016 4:44:20 PM	R37365
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	76	0.15	0.50		mg/L	10	9/21/2016 4:44:20 PM	W37365
Surr: BFB	103	0	70-130		%Rec	10	9/21/2016 4:44:20 PM	W37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB091616

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 10:30:00 AM

Lab ID: 1609A26-002

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/20/2016 5:41:47 PM	27591
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2016 5:41:47 PM	27591
Surr: DNOP	127	0	77.1-144		%Rec	1	9/20/2016 5:41:47 PM	27591
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	ND	0.0013	0.0020		mg/L	1	10/13/2016 1:54:57 PM	C37932
Cadmium	ND	0.00075	0.0020		mg/L	1	10/13/2016 1:54:57 PM	C37932
Chromium	ND	0.0018	0.0060		mg/L	1	10/13/2016 1:54:57 PM	C37932
Copper	ND	0.0040	0.0060		mg/L	1	10/13/2016 1:54:57 PM	C37932
Iron	ND	0.020	0.020		mg/L	1	10/13/2016 1:54:57 PM	C37932
Manganese	ND	0.00032	0.0020		mg/L	1	10/13/2016 1:54:57 PM	C37932
Silver	ND	0.0028	0.0050		mg/L	1	10/13/2016 1:54:57 PM	C37932
Zinc	ND	0.0028	0.010		mg/L	1	10/13/2016 1:54:57 PM	C37932
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	ND	0.00079	0.0020		mg/L	1	10/5/2016 6:05:27 PM	27884
Cadmium	ND	0.0015	0.0020		mg/L	1	10/5/2016 6:05:27 PM	27884
Chromium	ND	0.0027	0.0060		mg/L	1	10/5/2016 6:05:27 PM	27884
Copper	ND	0.0030	0.0060		mg/L	1	10/5/2016 6:05:27 PM	27884
Iron	ND	0.020	0.020		mg/L	1	10/5/2016 6:05:27 PM	27884
Manganese	ND	0.00027	0.0020		mg/L	1	10/5/2016 6:05:27 PM	27884
Silver	ND	0.0015	0.0050		mg/L	1	10/5/2016 6:05:27 PM	27884
Zinc	ND	0.0027	0.010		mg/L	1	10/5/2016 6:05:27 PM	27884
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	ND	0.00014	0.0010		mg/L	1	9/30/2016 4:44:23 PM	C37623
Lead	ND	0.00017	0.00050		mg/L	1	9/30/2016 4:44:23 PM	C37623
Selenium	ND	0.00021	0.0010		mg/L	1	9/30/2016 4:44:23 PM	C37623
Uranium	ND	0.000051	0.00050		mg/L	1	9/30/2016 4:44:23 PM	C37623
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	ND	0.00021	0.0010		mg/L	1	10/6/2016 5:55:48 PM	27884
Lead	ND	0.000081	0.00050		mg/L	1	10/6/2016 5:55:48 PM	27884
Selenium	ND	0.00019	0.0010		mg/L	1	10/6/2016 5:55:48 PM	27884
Uranium	ND	0.00017	0.00050		mg/L	1	10/6/2016 5:55:48 PM	27884
EPA METHOD 245.1: MERCURY							Analyst: pmf	
Mercury	0.000097	0.000053	0.00020	J	mg/L	1	9/29/2016 1:31:03 PM	27776
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Toluene	0.37	0.12	1.0	J	µg/L	1	9/22/2016 11:20:14 AM	W37409

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB091616

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 10:30:00 AM

Lab ID: 1609A26-002

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Naphthalene	ND	0.093	2.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Acetone	7.6	4.9	10	J	µg/L	1	9/22/2016 11:20:14 AM	W37409
Bromobenzene	ND	0.098	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Bromoform	ND	0.10	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Bromomethane	ND	0.78	3.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
2-Butanone	0.91	0.74	10	J	µg/L	1	9/22/2016 11:20:14 AM	W37409
Carbon disulfide	ND	0.60	10		µg/L	1	9/22/2016 11:20:14 AM	W37409
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Chloroethane	ND	0.19	2.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Chloroform	ND	0.089	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Chloromethane	ND	0.21	3.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Dibromomethane	ND	0.12	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB091616

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 10:30:00 AM

Lab ID: 1609A26-002

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
2-Hexanone	ND	0.84	10		µg/L	1	9/22/2016 11:20:14 AM	W37409
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/22/2016 11:20:14 AM	W37409
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Styrene	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/22/2016 11:20:14 AM	W37409
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/22/2016 11:20:14 AM	W37409
Surr: 1,2-Dichloroethane-d4	95.6	0	70-130		%Rec	1	9/22/2016 11:20:14 AM	W37409
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	9/22/2016 11:20:14 AM	W37409
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/22/2016 11:20:14 AM	W37409
Surr: Toluene-d8	101	0	70-130		%Rec	1	9/22/2016 11:20:14 AM	W37409
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.037	0.015	0.050	J	mg/L	1	9/21/2016 5:13:07 PM	W37365
Surr: BFB	100	0	70-130		%Rec	1	9/21/2016 5:13:07 PM	W37365

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
	R RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-56

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 8:10:00 AM

Lab ID: 1609A26-003

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	0.77	0.69	1.0	J	mg/L	1	9/20/2016 6:03:27 PM	27591
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2016 6:03:27 PM	27591
Surr: DNOP	128	0	77.1-144		%Rec	1	9/20/2016 6:03:27 PM	27591
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.36	0.0013	0.0020		mg/L	1	10/13/2016 1:58:42 PM	C37932
Cadmium	ND	0.00075	0.0020		mg/L	1	10/13/2016 1:58:42 PM	C37932
Chromium	ND	0.0018	0.0060		mg/L	1	10/13/2016 1:58:42 PM	C37932
Copper	0.0047	0.0040	0.0060	J	mg/L	1	10/13/2016 1:58:42 PM	C37932
Iron	0.078	0.020	0.020		mg/L	1	10/13/2016 1:58:42 PM	C37932
Manganese	0.39	0.00032	0.0020	*	mg/L	1	10/13/2016 1:58:42 PM	C37932
Silver	ND	0.0028	0.0050		mg/L	1	10/13/2016 1:58:42 PM	C37932
Zinc	0.011	0.0028	0.010		mg/L	1	10/13/2016 1:58:42 PM	C37932
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.37	0.00079	0.0020		mg/L	1	10/5/2016 6:11:17 PM	27884
Cadmium	ND	0.0015	0.0020		mg/L	1	10/5/2016 6:11:17 PM	27884
Chromium	ND	0.0027	0.0060		mg/L	1	10/5/2016 6:11:17 PM	27884
Copper	0.0049	0.0030	0.0060	J	mg/L	1	10/5/2016 6:11:17 PM	27884
Iron	0.33	0.020	0.020	*	mg/L	1	10/5/2016 6:11:17 PM	27884
Manganese	0.42	0.00027	0.0020	*	mg/L	1	10/5/2016 6:11:17 PM	27884
Silver	ND	0.0015	0.0050		mg/L	1	10/5/2016 6:11:17 PM	27884
Zinc	0.012	0.0027	0.010		mg/L	1	10/5/2016 6:11:17 PM	27884
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0049	0.00069	0.0050	J	mg/L	5	10/7/2016 6:19:29 PM	C37789
Lead	0.00046	0.00017	0.00050	J	mg/L	1	9/30/2016 4:53:38 PM	C37623
Selenium	0.0046	0.0042	0.020	J	mg/L	20	10/7/2016 6:22:33 PM	C37789
Uranium	0.023	0.000051	0.00050		mg/L	1	9/30/2016 4:53:38 PM	C37623
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0046	0.0021	0.010	J	mg/L	10	10/7/2016 11:02:58 AM	27884
Lead	0.0010	0.000081	0.00050		mg/L	1	10/6/2016 6:10:57 PM	27884
Selenium	0.0046	0.0019	0.010	J	mg/L	10	10/7/2016 11:02:58 AM	27884
Uranium	0.024	0.00087	0.0025		mg/L	5	10/7/2016 10:56:57 AM	27884
EPA METHOD 245.1: MERCURY							Analyst: pmf	
Mercury	0.00010	0.000053	0.00020	J	mg/L	1	9/29/2016 1:33:10 PM	27776
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	2.5	0.48	5.0	JD	µg/L	5	9/21/2016 6:39:35 PM	R37365
Toluene	0.92	0.59	5.0	JD	µg/L	5	9/21/2016 6:39:35 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-56

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 8:10:00 AM

Lab ID: 1609A26-003

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Ethylbenzene	ND	0.56	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Methyl tert-butyl ether (MTBE)	150	1.1	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2,4-Trimethylbenzene	1.1	0.55	5.0	JD	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,3,5-Trimethylbenzene	ND	0.58	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2-Dichloroethane (EDC)	16	0.58	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2-Dibromoethane (EDB)	ND	0.56	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Naphthalene	ND	0.46	10	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1-Methylnaphthalene	ND	1.0	20	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
2-Methylnaphthalene	ND	0.79	20	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Acetone	ND	25	50	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Bromobenzene	ND	0.49	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Bromodichloromethane	ND	0.70	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Bromoform	ND	0.51	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Bromomethane	ND	3.9	15	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
2-Butanone	ND	3.7	50	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Carbon disulfide	ND	3.0	50	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Carbon Tetrachloride	ND	0.54	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Chlorobenzene	ND	0.57	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Chloroethane	ND	0.96	10	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Chloroform	ND	0.44	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Chloromethane	ND	1.1	15	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
2-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
4-Chlorotoluene	ND	0.64	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
cis-1,2-DCE	ND	0.62	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
cis-1,3-Dichloropropene	ND	0.53	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2-Dibromo-3-chloropropane	ND	1.2	10	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Dibromochloromethane	ND	0.43	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Dibromomethane	ND	0.60	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2-Dichlorobenzene	ND	2.0	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,3-Dichlorobenzene	ND	0.72	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,4-Dichlorobenzene	ND	0.71	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Dichlorodifluoromethane	ND	1.8	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,1-Dichloroethane	ND	0.54	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,1-Dichloroethene	ND	0.54	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2-Dichloropropane	ND	0.55	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,3-Dichloropropane	ND	0.78	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
2,2-Dichloropropane	ND	0.83	10	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,1-Dichloropropene	ND	0.67	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Hexachlorobutadiene	ND	0.99	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-56

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 8:10:00 AM

Lab ID: 1609A26-003

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
2-Hexanone	ND	4.2	50	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Isopropylbenzene	1.1	0.52	5.0	JD	µg/L	5	9/21/2016 6:39:35 PM	R37365
4-Isopropyltoluene	ND	0.70	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
4-Methyl-2-pentanone	ND	2.1	50	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Methylene Chloride	ND	0.94	15	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
n-Butylbenzene	ND	0.80	15	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
n-Propylbenzene	ND	0.66	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
sec-Butylbenzene	ND	0.62	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Styrene	ND	0.55	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
tert-Butylbenzene	ND	0.58	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,1,1,2-Tetrachloroethane	ND	0.56	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,1,2,2-Tetrachloroethane	ND	0.64	10	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Tetrachloroethene (PCE)	ND	0.76	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
trans-1,2-DCE	ND	2.0	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
trans-1,3-Dichloropropene	ND	0.52	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2,3-Trichlorobenzene	ND	0.56	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2,4-Trichlorobenzene	ND	0.66	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,1,1-Trichloroethane	ND	0.46	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,1,2-Trichloroethane	ND	0.64	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Trichloroethene (TCE)	ND	0.88	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Trichlorofluoromethane	ND	1.0	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
1,2,3-Trichloropropane	ND	1.0	10	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Vinyl chloride	ND	0.98	5.0	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Xylenes, Total	ND	1.8	7.5	D	µg/L	5	9/21/2016 6:39:35 PM	R37365
Surr: 1,2-Dichloroethane-d4	94.5	0	70-130	D	%Rec	5	9/21/2016 6:39:35 PM	R37365
Surr: 4-Bromofluorobenzene	99.3	0	70-130	D	%Rec	5	9/21/2016 6:39:35 PM	R37365
Surr: Dibromofluoromethane	94.9	0	70-130	D	%Rec	5	9/21/2016 6:39:35 PM	R37365
Surr: Toluene-d8	97.1	0	70-130	D	%Rec	5	9/21/2016 6:39:35 PM	R37365
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	1.2	0.075	0.25		mg/L	5	9/21/2016 6:39:35 PM	W37365
Surr: BFB	99.3	0	70-130		%Rec	5	9/21/2016 6:39:35 PM	W37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-54

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 9:40:00 AM

Lab ID: 1609A26-004

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	1.6	0.69	1.0		mg/L	1	9/20/2016 6:25:00 PM	27591
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2016 6:25:00 PM	27591
Surr: DNOP	124	0	77.1-144		%Rec	1	9/20/2016 6:25:00 PM	27591
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.14	0.0013	0.0020		mg/L	1	10/13/2016 2:02:44 PM	C37932
Cadmium	ND	0.00075	0.0020		mg/L	1	10/13/2016 2:02:44 PM	C37932
Chromium	ND	0.0018	0.0060		mg/L	1	10/13/2016 2:02:44 PM	C37932
Copper	0.0088	0.0040	0.0060		mg/L	1	10/13/2016 2:02:44 PM	C37932
Iron	0.23	0.020	0.020		mg/L	1	10/13/2016 2:02:44 PM	C37932
Manganese	1.3	0.0016	0.010	*	mg/L	5	10/13/2016 2:04:44 PM	C37932
Silver	ND	0.0028	0.0050		mg/L	1	10/13/2016 2:02:44 PM	C37932
Zinc	0.0035	0.0028	0.010	J	mg/L	1	10/13/2016 2:02:44 PM	C37932
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	1.1	0.0040	0.010		mg/L	5	10/6/2016 5:53:56 PM	27884
Cadmium	ND	0.0015	0.0020		mg/L	1	10/5/2016 6:18:57 PM	27884
Chromium	0.013	0.0027	0.0060		mg/L	1	10/5/2016 6:18:57 PM	27884
Copper	0.032	0.0030	0.0060		mg/L	1	10/5/2016 6:18:57 PM	27884
Iron	11	0.40	0.40	*	mg/L	20	10/6/2016 5:55:45 PM	27884
Manganese	2.3	0.0014	0.010	*	mg/L	5	10/6/2016 5:53:56 PM	27884
Silver	ND	0.0015	0.0050		mg/L	1	10/5/2016 6:18:57 PM	27884
Zinc	0.036	0.0027	0.010		mg/L	1	10/5/2016 6:18:57 PM	27884
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0049	0.00069	0.0050	J	mg/L	5	10/7/2016 6:25:36 PM	C37789
Lead	0.0052	0.00017	0.00050		mg/L	1	9/30/2016 4:56:41 PM	C37623
Selenium	0.0068	0.0042	0.020	J	mg/L	20	10/7/2016 6:28:40 PM	C37789
Uranium	0.062	0.00026	0.0025	*	mg/L	5	10/7/2016 6:25:36 PM	C37789
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0057	0.0021	0.010	J	mg/L	10	10/7/2016 11:21:05 AM	27884
Lead	0.032	0.00041	0.0025	*	mg/L	5	10/7/2016 11:05:59 AM	27884
Selenium	0.0063	0.0019	0.010	J	mg/L	10	10/7/2016 11:21:05 AM	27884
Uranium	0.065	0.00087	0.0025	*	mg/L	5	10/7/2016 11:05:59 AM	27884
EPA METHOD 245.1: MERCURY							Analyst: pmf	
Mercury	0.00013	0.000053	0.00020	J	mg/L	1	9/29/2016 1:35:16 PM	27776
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	100	0.48	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Toluene	8.0	0.59	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-54

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 9:40:00 AM

Lab ID: 1609A26-004

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Ethylbenzene	29	0.56	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Methyl tert-butyl ether (MTBE)	2000	11	50		µg/L	50	9/22/2016 5:06:24 PM	W37409
1,2,4-Trimethylbenzene	15	0.55	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,3,5-Trimethylbenzene	6.5	0.58	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2-Dichloroethane (EDC)	ND	0.58	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2-Dibromoethane (EDB)	ND	0.56	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Naphthalene	4.2	0.46	10	J	µg/L	5	9/21/2016 7:08:24 PM	R37365
1-Methylnaphthalene	ND	1.0	20		µg/L	5	9/21/2016 7:08:24 PM	R37365
2-Methylnaphthalene	ND	0.79	20		µg/L	5	9/21/2016 7:08:24 PM	R37365
Acetone	ND	25	50		µg/L	5	9/21/2016 7:08:24 PM	R37365
Bromobenzene	ND	0.49	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Bromodichloromethane	ND	0.70	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Bromoform	ND	0.51	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Bromomethane	ND	3.9	15		µg/L	5	9/21/2016 7:08:24 PM	R37365
2-Butanone	ND	3.7	50		µg/L	5	9/21/2016 7:08:24 PM	R37365
Carbon disulfide	ND	3.0	50		µg/L	5	9/21/2016 7:08:24 PM	R37365
Carbon Tetrachloride	ND	0.54	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Chlorobenzene	ND	0.57	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Chloroethane	ND	0.96	10		µg/L	5	9/21/2016 7:08:24 PM	R37365
Chloroform	ND	0.44	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Chloromethane	ND	1.1	15		µg/L	5	9/21/2016 7:08:24 PM	R37365
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
4-Chlorotoluene	ND	0.64	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
cis-1,2-DCE	ND	0.62	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
cis-1,3-Dichloropropene	ND	0.53	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2-Dibromo-3-chloropropane	ND	1.2	10		µg/L	5	9/21/2016 7:08:24 PM	R37365
Dibromochloromethane	ND	0.43	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Dibromomethane	ND	0.60	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2-Dichlorobenzene	ND	2.0	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,3-Dichlorobenzene	ND	0.72	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,4-Dichlorobenzene	ND	0.71	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Dichlorodifluoromethane	ND	1.8	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,1-Dichloroethane	ND	0.54	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,1-Dichloroethene	ND	0.54	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2-Dichloropropane	ND	0.55	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,3-Dichloropropane	ND	0.78	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
2,2-Dichloropropane	ND	0.83	10		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,1-Dichloropropene	ND	0.67	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Hexachlorobutadiene	ND	0.99	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-54

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016 9:40:00 AM

Lab ID: 1609A26-004

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
2-Hexanone	ND	4.2	50		µg/L	5	9/21/2016 7:08:24 PM	R37365
Isopropylbenzene	1.2	0.52	5.0	J	µg/L	5	9/21/2016 7:08:24 PM	R37365
4-Isopropyltoluene	ND	0.70	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
4-Methyl-2-pentanone	ND	2.1	50		µg/L	5	9/21/2016 7:08:24 PM	R37365
Methylene Chloride	ND	0.94	15		µg/L	5	9/21/2016 7:08:24 PM	R37365
n-Butylbenzene	ND	0.80	15		µg/L	5	9/21/2016 7:08:24 PM	R37365
n-Propylbenzene	3.7	0.66	5.0	J	µg/L	5	9/21/2016 7:08:24 PM	R37365
sec-Butylbenzene	1.7	0.62	5.0	J	µg/L	5	9/21/2016 7:08:24 PM	R37365
Styrene	ND	0.55	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
tert-Butylbenzene	ND	0.58	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,1,1,2-Tetrachloroethane	ND	0.56	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,1,2,2-Tetrachloroethane	ND	0.64	10		µg/L	5	9/21/2016 7:08:24 PM	R37365
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
trans-1,2-DCE	ND	2.0	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
trans-1,3-Dichloropropene	ND	0.52	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2,3-Trichlorobenzene	ND	0.56	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2,4-Trichlorobenzene	ND	0.66	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,1,1-Trichloroethane	ND	0.46	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,1,2-Trichloroethane	ND	0.64	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Trichloroethene (TCE)	ND	0.88	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Trichlorofluoromethane	ND	1.0	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
1,2,3-Trichloropropane	ND	1.0	10		µg/L	5	9/21/2016 7:08:24 PM	R37365
Vinyl chloride	ND	0.98	5.0		µg/L	5	9/21/2016 7:08:24 PM	R37365
Xylenes, Total	28	1.8	7.5		µg/L	5	9/21/2016 7:08:24 PM	R37365
Surr: 1,2-Dichloroethane-d4	89.8	0	70-130		%Rec	5	9/21/2016 7:08:24 PM	R37365
Surr: 4-Bromofluorobenzene	95.3	0	70-130		%Rec	5	9/21/2016 7:08:24 PM	R37365
Surr: Dibromofluoromethane	86.0	0	70-130		%Rec	5	9/21/2016 7:08:24 PM	R37365
Surr: Toluene-d8	98.4	0	70-130		%Rec	5	9/21/2016 7:08:24 PM	R37365
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	3.2	0.075	0.25		mg/L	5	9/21/2016 7:08:24 PM	W37365
Surr: BFB	100	0	70-130		%Rec	5	9/21/2016 7:08:24 PM	W37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP06

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016

Lab ID: 1609A26-005

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	1.7	0.69	1.0		mg/L	1	9/20/2016 6:46:40 PM	27591
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2016 6:46:40 PM	27591
Surr: DNOP	129	0	77.1-144		%Rec	1	9/20/2016 6:46:40 PM	27591
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.14	0.0013	0.0020		mg/L	1	10/13/2016 2:12:36 PM	C37932
Cadmium	ND	0.00075	0.0020		mg/L	1	10/13/2016 2:12:36 PM	C37932
Chromium	ND	0.0018	0.0060		mg/L	1	10/13/2016 2:12:36 PM	C37932
Copper	0.0093	0.0040	0.0060		mg/L	1	10/13/2016 2:12:36 PM	C37932
Iron	0.24	0.020	0.020		mg/L	1	10/13/2016 2:12:36 PM	C37932
Manganese	1.4	0.0016	0.010	*	mg/L	5	10/13/2016 2:14:41 PM	C37932
Silver	ND	0.0028	0.0050		mg/L	1	10/13/2016 2:12:36 PM	C37932
Zinc	0.0035	0.0028	0.010	J	mg/L	1	10/13/2016 2:12:36 PM	C37932
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	1.3	0.0040	0.010		mg/L	5	10/6/2016 5:57:44 PM	27884
Cadmium	ND	0.0015	0.0020		mg/L	1	10/5/2016 6:20:48 PM	27884
Chromium	0.017	0.0027	0.0060		mg/L	1	10/5/2016 6:20:48 PM	27884
Copper	0.036	0.0030	0.0060		mg/L	1	10/5/2016 6:20:48 PM	27884
Iron	14	0.40	0.40	*	mg/L	20	10/6/2016 6:05:16 PM	27884
Manganese	2.4	0.0014	0.010	*	mg/L	5	10/6/2016 5:57:44 PM	27884
Silver	ND	0.0015	0.0050		mg/L	1	10/5/2016 6:20:48 PM	27884
Zinc	0.039	0.0027	0.010		mg/L	1	10/5/2016 6:20:48 PM	27884
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0049	0.00069	0.0050	J	mg/L	5	10/7/2016 6:31:43 PM	C37789
Lead	0.0053	0.00017	0.00050		mg/L	1	9/30/2016 4:59:45 PM	C37623
Selenium	0.0083	0.0042	0.020	J	mg/L	20	10/7/2016 6:40:58 PM	C37789
Uranium	0.063	0.00026	0.0025	*	mg/L	5	10/7/2016 6:31:43 PM	C37789
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0058	0.0021	0.010	J	mg/L	10	10/7/2016 11:27:06 AM	27884
Lead	0.036	0.00041	0.0025	*	mg/L	5	10/7/2016 11:24:06 AM	27884
Selenium	0.0070	0.0019	0.010	J	mg/L	10	10/7/2016 11:27:06 AM	27884
Uranium	0.066	0.00087	0.0025	*	mg/L	5	10/7/2016 11:24:06 AM	27884
EPA METHOD 245.1: MERCURY							Analyst: pmf	
Mercury	0.00013	0.000053	0.00020	J	mg/L	1	9/29/2016 1:37:23 PM	27776
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	110	0.96	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Toluene	9.8	1.2	10	J	µg/L	10	9/21/2016 7:37:10 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP06

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016

Lab ID: 1609A26-005

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Ethylbenzene	29	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Methyl tert-butyl ether (MTBE)	1900	21	100		µg/L	100	9/22/2016 5:35:14 PM	W37409
1,2,4-Trimethylbenzene	14	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,3,5-Trimethylbenzene	7.1	1.2	10	J	µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2-Dichloroethane (EDC)	ND	1.2	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2-Dibromoethane (EDB)	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Naphthalene	5.5	0.93	20	J	µg/L	10	9/21/2016 7:37:10 PM	R37365
1-Methylnaphthalene	ND	2.0	40		µg/L	10	9/21/2016 7:37:10 PM	R37365
2-Methylnaphthalene	ND	1.6	40		µg/L	10	9/21/2016 7:37:10 PM	R37365
Acetone	ND	49	100		µg/L	10	9/21/2016 7:37:10 PM	R37365
Bromobenzene	ND	0.98	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Bromodichloromethane	ND	1.4	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Bromoform	ND	1.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Bromomethane	ND	7.8	30		µg/L	10	9/21/2016 7:37:10 PM	R37365
2-Butanone	ND	7.4	100		µg/L	10	9/21/2016 7:37:10 PM	R37365
Carbon disulfide	ND	6.0	100		µg/L	10	9/21/2016 7:37:10 PM	R37365
Carbon Tetrachloride	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Chlorobenzene	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Chloroethane	ND	1.9	20		µg/L	10	9/21/2016 7:37:10 PM	R37365
Chloroform	ND	0.89	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Chloromethane	ND	2.1	30		µg/L	10	9/21/2016 7:37:10 PM	R37365
2-Chlorotoluene	ND	4.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
4-Chlorotoluene	ND	1.3	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
cis-1,2-DCE	ND	1.2	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
cis-1,3-Dichloropropene	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2-Dibromo-3-chloropropane	ND	2.3	20		µg/L	10	9/21/2016 7:37:10 PM	R37365
Dibromochloromethane	ND	0.87	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Dibromomethane	ND	1.2	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2-Dichlorobenzene	ND	4.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,3-Dichlorobenzene	ND	1.4	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,4-Dichlorobenzene	ND	1.4	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Dichlorodifluoromethane	ND	3.6	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,1-Dichloroethane	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,1-Dichloroethene	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2-Dichloropropane	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,3-Dichloropropane	ND	1.6	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
2,2-Dichloropropane	ND	1.7	20		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,1-Dichloropropene	ND	1.3	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Hexachlorobutadiene	ND	2.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP06

Project: 2016 3RD QTR (OW)

Collection Date: 9/16/2016

Lab ID: 1609A26-005

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
2-Hexanone	ND	8.4	100		µg/L	10	9/21/2016 7:37:10 PM	R37365
Isopropylbenzene	1.6	1.0	10	J	µg/L	10	9/21/2016 7:37:10 PM	R37365
4-Isopropyltoluene	ND	1.4	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
4-Methyl-2-pentanone	ND	4.3	100		µg/L	10	9/21/2016 7:37:10 PM	R37365
Methylene Chloride	ND	1.9	30		µg/L	10	9/21/2016 7:37:10 PM	R37365
n-Butylbenzene	ND	1.6	30		µg/L	10	9/21/2016 7:37:10 PM	R37365
n-Propylbenzene	3.8	1.3	10	J	µg/L	10	9/21/2016 7:37:10 PM	R37365
sec-Butylbenzene	2.6	1.2	10	J	µg/L	10	9/21/2016 7:37:10 PM	R37365
Styrene	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
tert-Butylbenzene	ND	1.2	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,1,1,2-Tetrachloroethane	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,1,2,2-Tetrachloroethane	ND	1.3	20		µg/L	10	9/21/2016 7:37:10 PM	R37365
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
trans-1,2-DCE	ND	4.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
trans-1,3-Dichloropropene	ND	1.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2,3-Trichlorobenzene	ND	1.1	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2,4-Trichlorobenzene	ND	1.3	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,1,1-Trichloroethane	ND	0.91	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,1,2-Trichloroethane	ND	1.3	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Trichloroethene (TCE)	ND	1.8	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Trichlorofluoromethane	ND	2.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
1,2,3-Trichloropropane	ND	2.0	20		µg/L	10	9/21/2016 7:37:10 PM	R37365
Vinyl chloride	ND	2.0	10		µg/L	10	9/21/2016 7:37:10 PM	R37365
Xylenes, Total	31	3.7	15		µg/L	10	9/21/2016 7:37:10 PM	R37365
Surr: 1,2-Dichloroethane-d4	96.5	0	70-130		%Rec	10	9/21/2016 7:37:10 PM	R37365
Surr: 4-Bromofluorobenzene	95.4	0	70-130		%Rec	10	9/21/2016 7:37:10 PM	R37365
Surr: Dibromofluoromethane	90.5	0	70-130		%Rec	10	9/21/2016 7:37:10 PM	R37365
Surr: Toluene-d8	99.1	0	70-130		%Rec	10	9/21/2016 7:37:10 PM	R37365
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	3.4	0.15	0.50		mg/L	10	9/21/2016 7:37:10 PM	W37365
Surr: BFB	101	0	70-130		%Rec	10	9/21/2016 7:37:10 PM	W37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 3RD QTR (OW)

Collection Date:

Lab ID: 1609A26-006

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Toluene	ND	0.12	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Naphthalene	ND	0.093	2.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Acetone	ND	4.9	10		µg/L	1	9/21/2016 8:05:54 PM	R37365
Bromobenzene	ND	0.098	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Bromoform	ND	0.10	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Bromomethane	ND	0.78	3.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
2-Butanone	ND	0.74	10		µg/L	1	9/21/2016 8:05:54 PM	R37365
Carbon disulfide	ND	0.60	10		µg/L	1	9/21/2016 8:05:54 PM	R37365
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Chloroethane	ND	0.19	2.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Chloroform	ND	0.089	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Chloromethane	ND	0.21	3.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Dibromomethane	ND	0.12	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/21/2016 8:05:54 PM	R37365

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609A26

Date Reported: 10/25/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 3RD QTR (OW)

Collection Date:

Lab ID: 1609A26-006

Matrix: AQUEOUS

Received Date: 9/18/2016 2:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
2-Hexanone	ND	0.84	10		µg/L	1	9/21/2016 8:05:54 PM	R37365
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/21/2016 8:05:54 PM	R37365
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Styrene	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/21/2016 8:05:54 PM	R37365
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/21/2016 8:05:54 PM	R37365
Surr: 1,2-Dichloroethane-d4	96.9	0	70-130		%Rec	1	9/21/2016 8:05:54 PM	R37365
Surr: 4-Bromofluorobenzene	94.4	0	70-130		%Rec	1	9/21/2016 8:05:54 PM	R37365
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	9/21/2016 8:05:54 PM	R37365
Surr: Toluene-d8	99.8	0	70-130		%Rec	1	9/21/2016 8:05:54 PM	R37365
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	ND	0.015	0.050		mg/L	1	9/21/2016 8:05:54 PM	W37365
Surr: BFB	96.8	0	70-130		%Rec	1	9/21/2016 8:05:54 PM	W37365

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
	R RPD outside accepted recovery limits	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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID MB-C	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: C37932		RunNo: 37932							
Prep Date:	Analysis Date: 10/13/2016		SeqNo: 1181916		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								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID LLCS-C	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: C37932		RunNo: 37932							
Prep Date:	Analysis Date: 10/13/2016		SeqNo: 1181917		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0023	0.0020	0.002000	0	116	50	150			
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0056	0.0060	0.006000	0	93.2	50	150			J
Manganese	0.0018	0.0020	0.002000	0	92.0	50	150			J
Silver	0.0046	0.0050	0.005000	0	91.4	50	150			J
Zinc	0.0051	0.010	0.005000	0	102	50	150			J

Sample ID LCS-C	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: C37932		RunNo: 37932							
Prep Date:	Analysis Date: 10/13/2016		SeqNo: 1181921		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Chromium	0.48	0.0060	0.5000	0	95.2	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.48	0.020	0.5000	0	96.6	85	115			
Manganese	0.47	0.0020	0.5000	0	93.2	85	115			
Silver	0.093	0.0050	0.1000	0	93.1	85	115			
Zinc	0.46	0.010	0.5000	0	92.5	85	115			

Sample ID LLCS-C	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: C37932		RunNo: 37932							
Prep Date:	Analysis Date: 10/13/2016		SeqNo: 1181938		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
R RPD outside accepted recovery limits	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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	LLLCS-C	SampType:	LCSLL	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	C37932	RunNo:	37932					
Prep Date:		Analysis Date:	10/13/2016	SeqNo:	1181938	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0086	0.0060	0.006000	0	143	50	150			
Iron	0.017	0.020	0.02000	0	84.8	50	150			J

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

R RPD outside accepted recovery limits

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	MB-27884		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	27884		RunNo:	37699			
Prep Date:	10/4/2016		Analysis Date:	10/5/2016		SeqNo:	1174527		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								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-27884		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	27884		RunNo:	37699			
Prep Date:	10/4/2016		Analysis Date:	10/5/2016		SeqNo:	1174528		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.6	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Chromium	0.47	0.0060	0.5000	0	94.7	85	115			
Copper	0.47	0.0060	0.5000	0	93.9	85	115			
Iron	0.47	0.020	0.5000	0	93.3	85	115			
Manganese	0.46	0.0020	0.5000	0	92.7	85	115			
Silver	0.096	0.0050	0.1000	0	95.6	85	115			
Zinc	0.47	0.010	0.5000	0	94.5	85	115			

Sample ID	LLCS-27884		SampType:	LCSLL		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	27884		RunNo:	37699			
Prep Date:	10/4/2016		Analysis Date:	10/5/2016		SeqNo:	1174529		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0015	0.0020	0.002000	0	77.0	50	150			J
Cadmium	0.0016	0.0020	0.002000	0	82.5	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.3	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			J
Manganese	0.0019	0.0020	0.002000	0	95.5	50	150			J
Silver	0.0042	0.0050	0.005000	0	83.4	50	150			J
Zinc	0.0050	0.010	0.005000	0	100	50	150			J

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	LLLCS-27884		SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 27884		RunNo: 37699					
Prep Date:	10/4/2016		Analysis Date: 10/5/2016		SeqNo: 1174530		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.021	0.020	0.02000	0	104	50	150			

Sample ID	1609A26-001DMS		SampType: MS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	OW-55		Batch ID: 27884		RunNo: 37699					
Prep Date:	10/4/2016		Analysis Date: 10/5/2016		SeqNo: 1174650		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	97.9	70	130			
Chromium	0.48	0.0060	0.5000	0.008990	94.8	70	130			
Copper	0.50	0.0060	0.5000	0.009430	97.2	70	130			
Zinc	0.50	0.010	0.5000	0.06576	86.3	70	130			

Sample ID	1609A26-001DMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	OW-55		Batch ID: 27884		RunNo: 37699					
Prep Date:	10/4/2016		Analysis Date: 10/5/2016		SeqNo: 1174651		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	98.1	70	130	0.261	20	
Chromium	0.48	0.0060	0.5000	0.008990	94.6	70	130	0.215	20	
Copper	0.50	0.0060	0.5000	0.009430	97.3	70	130	0.149	20	
Zinc	0.50	0.010	0.5000	0.06576	85.9	70	130	0.385	20	

Sample ID	1609A26-002DMS		SampType: MS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	FB091616		Batch ID: 27884		RunNo: 37699					
Prep Date:	10/4/2016		Analysis Date: 10/5/2016		SeqNo: 1174653		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.2	70	130			
Cadmium	0.49	0.0020	0.5000	0	98.3	70	130			
Chromium	0.48	0.0060	0.5000	0	95.8	70	130			
Copper	0.47	0.0060	0.5000	0	93.5	70	130			
Iron	0.48	0.020	0.5000	0	96.4	70	130			
Manganese	0.47	0.0020	0.5000	0	94.0	70	130			
Silver	0.099	0.0050	0.1000	0	99.1	70	130			
Zinc	0.49	0.010	0.5000	0	97.2	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 |
| R RPD outside accepted recovery limits | 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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	1609A26-002DMSD			SampType:	MSD		TestCode: EPA Method 200.7: Total Metals				
Client ID:	FB091616			Batch ID:	27884		RunNo: 37699				
Prep Date:	10/4/2016		Analysis Date:		10/5/2016		SeqNo: 1174654		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.48	0.0020	0.5000	0	96.4	70	130	0.193	20		
Cadmium	0.50	0.0020	0.5000	0	99.4	70	130	1.11	20		
Chromium	0.48	0.0060	0.5000	0	96.7	70	130	0.983	20		
Copper	0.47	0.0060	0.5000	0	93.6	70	130	0.118	20		
Iron	0.47	0.020	0.5000	0	94.5	70	130	1.97	20		
Manganese	0.47	0.0020	0.5000	0	94.4	70	130	0.425	20		
Silver	0.10	0.0050	0.1000	0	99.6	70	130	0.473	20		
Zinc	0.49	0.010	0.5000	0	97.1	70	130	0.0988	20		

Sample ID	1609A26-001DMS			SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-55			Batch ID:	27884		RunNo:	37749			
Prep Date:	10/4/2016			Analysis Date:	10/6/2016		SeqNo:	1176009		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.036	0.0050	0.1000	0	36.1	70	130			S	

Sample ID	1609A26-001DMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-55		Batch ID:		27884		RunNo:	37749			
Prep Date:	10/4/2016		Analysis Date:		10/6/2016		SeqNo:	1176013		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.034	0.0050	0.1000	0	33.8	70	130	6.64	20	S	

Sample ID	1609A26-001DMS			SampType:	MS		TestCode:	EPA Method 200.7: Total Metals				
Client ID:	OW-55			Batch ID:	27884		RunNo:	37749				
Prep Date:	10/4/2016			Analysis Date:	10/6/2016		SeqNo:	1176016			Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Barium	1.7	0.010	0.5000	1.221	100	70	130					

Sample ID	1609A26-001DMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals				
Client ID:	OW-55			Batch ID:	27884		RunNo:	37749				
Prep Date:	10/4/2016			Analysis Date:	10/6/2016		SeqNo:	1176017			Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Barium	1.7	0.010	0.5000	1.221	95.9	70	130	1.19	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 |
| R RPD outside accepted recovery limits | 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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID LCS	SampType: LCS				TestCode: EPA 200.8: Dissolved Metals					
Client ID: LCSW	Batch ID: C37623				RunNo: 37623					
Prep Date:	Analysis Date: 9/30/2016				SeqNo: 1171239		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	93.4	85	115			
Lead	0.012	0.00050	0.01250	0	94.9	85	115			
Selenium	0.024	0.0010	0.02500	0	94.0	85	115			
Uranium	0.012	0.00050	0.01250	0	93.6	85	115			

Sample ID LLCS	SampType: LCSLL				TestCode: EPA 200.8: Dissolved Metals					
Client ID: BatchQC	Batch ID: C37623				RunNo: 37623					
Prep Date:	Analysis Date: 9/30/2016				SeqNo: 1171246		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	100	50	150			
Lead	0.00050	0.00050	0.0005000	0	100	50	150			
Selenium	0.0011	0.0010	0.001000	0	107	50	150			
Uranium	0.00049	0.00050	0.0005000	0	97.0	50	150			J

Sample ID MB	SampType: MBLK				TestCode: EPA 200.8: Dissolved Metals					
Client ID: PBW	Batch ID: C37623				RunNo: 37623					
Prep Date:	Analysis Date: 9/30/2016				SeqNo: 1171252		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 LLCS	SampType: LCSLL				TestCode: EPA 200.8: Dissolved Metals					
Client ID: BatchQC	Batch ID: C37789				RunNo: 37789					
Prep Date:	Analysis Date: 10/7/2016				SeqNo: 1177742		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	110	50	150			
Selenium	0.0011	0.0010	0.001000	0	110	50	150			
Uranium	0.00051	0.00050	0.0005000	0	103	50	150			

Sample ID MB	SampType: MBLK				TestCode: EPA 200.8: Dissolved Metals					
Client ID: PBW	Batch ID: C37789				RunNo: 37789					
Prep Date:	Analysis Date: 10/7/2016				SeqNo: 1177744		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID:	PBW	Batch ID: C37789			RunNo: 37789						
Prep Date:		Analysis Date: 10/7/2016			SeqNo: 1177744		Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		ND	0.0010								
Uranium		ND	0.00050								

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	1609A26-003DMSLL				SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	OW-56				Batch ID:	27884		RunNo:	37763		
Prep Date:	10/4/2016				Analysis Date:	10/6/2016		SeqNo:	1176367	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.015	0.00050	0.01250	0.001040	113	70	130				

Sample ID	MB-27884				SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	PBW				Batch ID:	27884		RunNo:	37763		
Prep Date:	10/4/2016				Analysis Date:	10/6/2016		SeqNo:	1176393	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	MSLCS-27884				SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	LCSW				Batch ID:	27884		RunNo:	37763		
Prep Date:	10/4/2016				Analysis Date:	10/6/2016		SeqNo:	1176395	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	99.8	85	115				
Lead	0.013	0.00050	0.01250	0	104	85	115				
Selenium	0.024	0.0010	0.02500	0	97.4	85	115				
Uranium	0.013	0.00050	0.01250	0	102	85	115				

Sample ID	MSLLCS-27884				SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	BatchQC				Batch ID:	27884		RunNo:	37763		
Prep Date:	10/4/2016				Analysis Date:	10/6/2016		SeqNo:	1176397	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	104	50	150				
Lead	0.00052	0.00050	0.0005000	0	105	50	150				
Selenium	0.00089	0.0010	0.001000	0	89.5	50	150				J
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150				J

Sample ID	1609A26-003DMSLL				SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	OW-56				Batch ID:	27884		RunNo:	37781		
Prep Date:	10/4/2016				Analysis Date:	10/7/2016		SeqNo:	1176920	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.038	0.0025	0.01250	0.02415	107	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
R RPD outside accepted recovery limits	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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	1609A26-004DMSDL			SampType:	MSDLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	OW-54			Batch ID:	27884			RunNo:	37781		
Prep Date:	10/4/2016			Analysis Date:	10/7/2016			SeqNo:	1176923		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.046	0.0025	0.01250	0.03164	115	70	130	1.71	20		
Uranium	0.081	0.0025	0.01250	0.06456	128	70	130	2.00	20		

Sample ID	1609A26-004DMSLL			SampType:	MSLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	OW-54			Batch ID:	27884			RunNo:	37781		
Prep Date:	10/4/2016			Analysis Date:	10/7/2016			SeqNo:	1176924		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.047	0.0025	0.01250	0.03164	121	70	130				
Uranium	0.082	0.0025	0.01250	0.06456	141	70	130			S	

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	MB-27776		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 27776		RunNo: 37570					
Prep Date:	9/28/2016		Analysis Date: 9/29/2016		SeqNo: 1168946		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	0.00011	0.00020								J

Sample ID	LCS-27776			SampType:	LCS		TestCode:	EPA Method 245.1: Mercury			
Client ID:	LCSW			Batch ID:	27776		RunNo:	37570			
Prep Date:	9/28/2016			Analysis Date:	9/29/2016		SeqNo:	1168947		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0047	0.00020	0.005000	0	94.2	80	120				

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	1609A26-001CMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range					
Client ID:	OW-55	Batch ID:	27591	RunNo:	37320					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1159804	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	9.9	1.0	5.000	5.350	91.4	79.6	148			
Surr: DNOP	0.58		0.5000		116	77.1	144			

Sample ID	1609A26-001CMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range					
Client ID:	OW-55	Batch ID:	27591	RunNo:	37320					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1159805	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	10	1.0	5.000	5.350	101	79.6	148	4.76	20	
Surr: DNOP	0.61		0.5000		122	77.1	144	0	0	

Sample ID	LCS-27591	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW	Batch ID:	27591	RunNo:	37320					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1159822	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	63.2	155			
Surr: DNOP	0.57		0.5000		114	77.1	144			

Sample ID	MB-27591	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range					
Client ID:	PBW	Batch ID:	27591	RunNo:	37320					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1159826	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		116	77.1	144			

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
R RPD outside accepted recovery limits	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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R37365			RunNo: 37365					
Prep Date:		Analysis Date: 9/21/2016			SeqNo: 1160915		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	92.7	70	130			
Chlorobenzene	19	1.0	20.00	0	94.9	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.5	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.0	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.7	70	130			
Surr: Toluene-d8	9.8		10.00		98.0	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R37365			RunNo: 37365					
Prep Date:		Analysis Date: 9/21/2016			SeqNo: 1160916		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	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	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								

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

R RPD outside accepted recovery limits

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R37365			RunNo: 37365					
Prep Date:		Analysis Date: 9/21/2016			SeqNo: 1160916	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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								

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID rb	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES					
Client ID: PBW	Batch ID: R37365				RunNo: 37365					
Prep Date:	Analysis Date: 9/21/2016				SeqNo: 1160916		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.1	70	130			
Surr: Dibromofluoromethane	10		10.00		99.6	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Sample ID 100ng lcs	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW	Batch ID: W37409				RunNo: 37409					
Prep Date:	Analysis Date: 9/22/2016				SeqNo: 1162560		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	19	1.0	20.00	0	95.8	70	130			
Chlorobenzene	19	1.0	20.00	0	95.6	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.4	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Sample ID rb	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES					
Client ID: PBW	Batch ID: W37409				RunNo: 37409					
Prep Date:	Analysis Date: 9/22/2016				SeqNo: 1162561		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	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	ND	4.0								
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
R	RPD outside accepted recovery limits	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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W37409			RunNo: 37409					
Prep Date:		Analysis Date: 9/22/2016			SeqNo: 1162561	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	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								
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.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W37409			RunNo: 37409					
Prep Date:		Analysis Date: 9/22/2016			SeqNo: 1162561	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	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.9	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	9.5		10.00		95.2	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
R	RPD outside accepted recovery limits	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#: 1609A26

25-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3RD QTR (OW)

Sample ID	2.5ug gro lcs	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID: W37365			RunNo: 37365					
Prep Date:		Analysis Date: 9/21/2016			SeqNo: 1161683		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.2	75.4	118			
Surr: BFB	10		10.00		100	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID: W37365			RunNo: 37365					
Prep Date:		Analysis Date: 9/21/2016			SeqNo: 1161684		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.019	0.050								J
Surr: BFB	9.7		10.00		97.3	70	130			

Sample ID	1609A26-002BMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	FB091616		Batch ID: W37365		RunNo: 37365					
Prep Date:			Analysis Date: 9/21/2016		SeqNo: 1161687		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0.03720	82.6	53.8	128			
Surr: BFB	9.9		10.00		99.1	70	130			

Sample ID	1609A26-002BMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	FB091616		Batch ID: W37365		RunNo: 37365					
Prep Date:			Analysis Date: 9/21/2016		SeqNo: 1161688		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0.03720	79.7	53.8	128	3.34	20	
Surr: BFB	10		10.00		103	70	130	0	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1609A26

RcptNo: 1

Received by/date: *AF 09/16/16*

Logged By: Anne Thorne 9/18/2016 2:00:00 PM

Anne Thorne

Completed By: Anne Thorne 9/19/2016

Anne Thorne

Reviewed By: *AS* 09/19/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☒ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☒ *je 09/19/16*
9. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 10
(<2 or >12 unless noted)
Adjusted? yes
Checked by: *je*

Special Handling (if applicable)

16. 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:

17. Additional remarks:

For metals analysis: added IMC to -004D and -005D for acceptable pH 09/19/16

18. Cooler Information

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

@ 1535

je



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

October 21, 2016

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2016 Annual

OrderNo.: 1609453

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/8/2016 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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 2016 Annual

Collection Date: 9/7/2016 8:30:00 AM

Lab ID: 1609453-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 11:49:54 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 11:49:54 PM	27430
Surr: DNOP	118	0	77.1-144		%Rec	1	9/12/2016 11:49:54 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.95	0.050	0.10		mg/L	1	9/12/2016 7:02:28 PM	R37143
Chloride	53	1.0	10		mg/L	20	9/12/2016 7:14:52 PM	R37143
Bromide	0.15	0.044	0.10		mg/L	1	9/12/2016 7:02:28 PM	R37143
Phosphorus, Orthophosphate (As P')	ND	0.076	0.50	H	mg/L	1	9/12/2016 7:02:28 PM	R37143
Sulfate	150	2.8	10		mg/L	20	9/12/2016 7:14:52 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 4:02:47 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.019	0.0013	0.0020		mg/L	1	9/23/2016 3:17:53 PM	B37443
Cadmium	ND	0.00075	0.0020		mg/L	1	9/23/2016 3:17:53 PM	B37443
Calcium	3.5	0.50	1.0		mg/L	1	9/23/2016 3:17:53 PM	B37443
Chromium	0.0028	0.0018	0.0060	J	mg/L	1	9/23/2016 3:17:53 PM	B37443
Copper	ND	0.0040	0.0060		mg/L	1	9/23/2016 3:17:53 PM	B37443
Iron	0.078	0.020	0.020		mg/L	1	9/23/2016 3:17:53 PM	B37443
Magnesium	0.87	0.50	1.0	J	mg/L	1	9/23/2016 3:17:53 PM	B37443
Manganese	0.0064	0.00032	0.0020		mg/L	1	9/23/2016 3:17:53 PM	B37443
Potassium	0.57	0.50	1.0	J	mg/L	1	9/23/2016 3:17:53 PM	B37443
Silver	ND	0.0028	0.0050		mg/L	1	9/23/2016 3:17:53 PM	B37443
Sodium	300	2.5	5.0		mg/L	5	9/23/2016 3:30:11 PM	B37443
Zinc	0.0029	0.0028	0.010	J	mg/L	1	9/23/2016 3:17:53 PM	B37443
EPA METHOD 200.7: TOTAL METALS							Analyst: ELS	
Barium	0.043	0.00079	0.0020		mg/L	1	10/3/2016 4:06:46 PM	27612
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 4:06:46 PM	27612
Chromium	0.036	0.0027	0.0060		mg/L	1	10/3/2016 4:06:46 PM	27612
Copper	0.0099	0.0030	0.0060		mg/L	1	10/3/2016 4:06:46 PM	27612
Iron	1.6	0.10	0.10	*	mg/L	5	10/4/2016 3:14:02 PM	27612
Manganese	0.035	0.00027	0.0020		mg/L	1	10/3/2016 4:06:46 PM	27612
Silver	ND	0.0077	0.025		mg/L	5	10/4/2016 3:14:02 PM	27612
Zinc	0.011	0.0027	0.010		mg/L	1	10/3/2016 4:06:46 PM	27612
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0030	0.00014	0.0010		mg/L	1	9/20/2016 3:25:26 PM	C37327
Lead	0.00021	0.00017	0.00050	J	mg/L	1	9/20/2016 3:25:26 PM	C37327
Selenium	0.0011	0.00021	0.0010		mg/L	1	9/20/2016 3:25:26 PM	C37327
Uranium	0.032	0.00026	0.0025	*	mg/L	5	9/21/2016 8:20:05 PM	A37386

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

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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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 2016 Annual

Collection Date: 9/7/2016 8:30:00 AM

Lab ID: 1609453-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0030	0.00021	0.0010		mg/L	1	9/21/2016 4:54:59 PM	27612
Lead	0.0017	0.000081	0.00050		mg/L	1	9/21/2016 4:54:59 PM	27612
Selenium	0.00096	0.00019	0.0010	J	mg/L	1	9/21/2016 4:54:59 PM	27612
Uranium	0.031	0.00087	0.0025	*	mg/L	5	9/22/2016 2:22:30 PM	27612
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000058	0.000053	0.00020	J	mg/L	1	9/15/2016 1:33:38 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Benzoic acid	9.9	2.6	20	J	µg/L	1	9/14/2016 10:37:04 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Bis(2-ethylhexyl)phthalate	3.8	2.6	10	J	µg/L	1	9/14/2016 10:37:04 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 10:37:04 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 10:37:04 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Di-n-octyl phthalate	4.9	2.0	10	J	µg/L	1	9/14/2016 10:37:04 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 10:37:04 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 10:37:04 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 10:37:04 PM	27434

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 2016 Annual

Collection Date: 9/7/2016 8:30:00 AM

Lab ID: 1609453-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Dimethyl phthalate	5.4	2.4	10	J	µg/L	1	9/14/2016 10:37:04 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 10:37:04 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 10:37:04 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 10:37:04 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 10:37:04 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 10:37:04 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 10:37:04 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 10:37:04 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 10:37:04 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 10:37:04 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 10:37:04 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 10:37:04 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 10:37:04 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 10:37:04 PM	27434

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
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 2016 Annual

Collection Date: 9/7/2016 8:30:00 AM

Lab ID: 1609453-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 10:37:04 PM	27434
Surr: 2-Fluorophenol	13.9	0	15-123	S	%Rec	1	9/14/2016 10:37:04 PM	27434
Surr: Phenol-d5	12.6	0	15-124	S	%Rec	1	9/14/2016 10:37:04 PM	27434
Surr: 2,4,6-Tribromophenol	27.8	0	18.4-134		%Rec	1	9/14/2016 10:37:04 PM	27434
Surr: Nitrobenzene-d5	39.2	0	28.8-134		%Rec	1	9/14/2016 10:37:04 PM	27434
Surr: 2-Fluorobiphenyl	37.0	0	35.9-125		%Rec	1	9/14/2016 10:37:04 PM	27434
Surr: 4-Terphenyl-d14	26.6	0	15-146		%Rec	1	9/14/2016 10:37:04 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Toluene	ND	0.12	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Naphthalene	ND	0.093	2.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Acetone	ND	4.9	10		µg/L	1	9/20/2016 5:00:37 PM	R37339
Bromobenzene	ND	0.098	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Bromoform	ND	0.10	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Bromomethane	ND	0.78	3.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
2-Butanone	ND	0.74	10		µg/L	1	9/20/2016 5:00:37 PM	R37339
Carbon disulfide	ND	0.60	10		µg/L	1	9/20/2016 5:00:37 PM	R37339
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Chloroethane	ND	0.19	2.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Chloroform	ND	0.089	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Chloromethane	ND	0.21	3.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Dibromomethane	ND	0.12	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339

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EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
2-Hexanone	ND	0.84	10		µg/L	1	9/20/2016 5:00:37 PM	R37339
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/20/2016 5:00:37 PM	R37339
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Styrene	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/20/2016 5:00:37 PM	R37339
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/20/2016 5:00:37 PM	R37339
Surr: 1,2-Dichloroethane-d4	96.9	0	70-130		%Rec	1	9/20/2016 5:00:37 PM	R37339
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	1	9/20/2016 5:00:37 PM	R37339
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	9/20/2016 5:00:37 PM	R37339
Surr: Toluene-d8	97.7	0	70-130		%Rec	1	9/20/2016 5:00:37 PM	R37339

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 2016 Annual

Collection Date: 9/7/2016 8:30:00 AM

Lab ID: 1609453-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.028	0.015	0.050	J	mg/L	1	9/12/2016 11:12:18 PM	G37129
Surr: BFB	99.6	0	70-130		%Rec	1	9/12/2016 11:12:18 PM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2016 Annual

Collection Date: 9/7/2016 10:30:00 AM

Lab ID: 1609453-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/13/2016 12:17:29 AM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/13/2016 12:17:29 AM	27430
Surr: DNOP	116	0	77.1-144		%Rec	1	9/13/2016 12:17:29 AM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.63	0.050	0.10		mg/L	1	9/12/2016 7:27:17 PM	R37143
Chloride	44	1.0	10		mg/L	20	9/12/2016 7:39:41 PM	R37143
Bromide	0.10	0.044	0.10	J	mg/L	1	9/12/2016 7:27:17 PM	R37143
Phosphorus, Orthophosphate (As P _i)	ND	0.076	0.50	H	mg/L	1	9/12/2016 7:27:17 PM	R37143
Sulfate	150	2.8	10		mg/L	20	9/12/2016 7:39:41 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 4:15:12 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.011	0.0013	0.0020		mg/L	1	9/23/2016 3:35:59 PM	B37443
Cadmium	ND	0.00075	0.0020		mg/L	1	9/23/2016 3:35:59 PM	B37443
Calcium	1.6	0.50	1.0		mg/L	1	9/23/2016 3:35:59 PM	B37443
Chromium	ND	0.0018	0.0060		mg/L	1	9/23/2016 3:35:59 PM	B37443
Copper	ND	0.0040	0.0060		mg/L	1	9/23/2016 3:35:59 PM	B37443
Iron	ND	0.020	0.020		mg/L	1	9/23/2016 3:35:59 PM	B37443
Magnesium	ND	0.50	1.0		mg/L	1	9/23/2016 3:35:59 PM	B37443
Manganese	0.0031	0.00032	0.0020		mg/L	1	9/23/2016 3:35:59 PM	B37443
Potassium	0.71	0.50	1.0	J	mg/L	1	9/23/2016 3:35:59 PM	B37443
Silver	ND	0.0028	0.0050		mg/L	1	9/23/2016 3:35:59 PM	B37443
Sodium	260	2.5	5.0		mg/L	5	9/23/2016 3:42:06 PM	B37443
Zinc	ND	0.0028	0.010		mg/L	1	9/23/2016 3:35:59 PM	B37443
EPA METHOD 200.7: TOTAL METALS							Analyst: ELS	
Barium	0.012	0.00079	0.0020		mg/L	1	10/3/2016 4:24:06 PM	27612
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 4:24:06 PM	27612
Chromium	ND	0.0027	0.0060		mg/L	1	10/3/2016 4:24:06 PM	27612
Copper	ND	0.0030	0.0060		mg/L	1	10/3/2016 4:24:06 PM	27612
Iron	ND	0.020	0.020		mg/L	1	10/3/2016 4:24:06 PM	27612
Manganese	0.0032	0.00027	0.0020		mg/L	1	10/3/2016 4:24:06 PM	27612
Silver	ND	0.0015	0.0050		mg/L	1	10/12/2016 8:49:11 PM	27933
Zinc	ND	0.0027	0.010		mg/L	1	10/3/2016 4:24:06 PM	27612
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0013	0.00014	0.0010		mg/L	1	9/20/2016 3:28:29 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:28:29 PM	C37327
Selenium	0.00054	0.00021	0.0010	J	mg/L	1	9/20/2016 3:28:29 PM	C37327
Uranium	0.011	0.000051	0.00050		mg/L	1	9/20/2016 3:28:29 PM	C37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2016 Annual

Collection Date: 9/7/2016 10:30:00 AM

Lab ID: 1609453-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0015	0.00021	0.0010		mg/L	1	9/21/2016 4:58:00 PM	27612
Lead	0.00014	0.000081	0.00050	J	mg/L	1	9/21/2016 4:58:00 PM	27612
Selenium	0.00053	0.00019	0.0010	J	mg/L	1	9/21/2016 4:58:00 PM	27612
Uranium	0.010	0.00017	0.00050		mg/L	1	9/21/2016 4:58:00 PM	27612
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000056	0.000053	0.00020	J	mg/L	1	9/15/2016 1:39:55 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Benzoic acid	9.8	2.6	20	J	µg/L	1	9/14/2016 11:05:13 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Bis(2-ethylhexyl)phthalate	4.0	2.6	10	J	µg/L	1	9/14/2016 11:05:13 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 11:05:13 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 11:05:13 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Di-n-octyl phthalate	4.4	2.0	10	J	µg/L	1	9/14/2016 11:05:13 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 11:05:13 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 11:05:13 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 11:05:13 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2016 Annual

Collection Date: 9/7/2016 10:30:00 AM

Lab ID: 1609453-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Dimethyl phthalate	5.1	2.4	10	J	µg/L	1	9/14/2016 11:05:13 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 11:05:13 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 11:05:13 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 11:05:13 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 11:05:13 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 11:05:13 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 11:05:13 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 11:05:13 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 11:05:13 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 11:05:13 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 11:05:13 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 11:05:13 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 11:05:13 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 11:05:13 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2016 Annual

Collection Date: 9/7/2016 10:30:00 AM

Lab ID: 1609453-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 11:05:13 PM	27434
Surr: 2-Fluorophenol	23.4	0	15-123		%Rec	1	9/14/2016 11:05:13 PM	27434
Surr: Phenol-d5	21.6	0	15-124		%Rec	1	9/14/2016 11:05:13 PM	27434
Surr: 2,4,6-Tribromophenol	36.3	0	18.4-134		%Rec	1	9/14/2016 11:05:13 PM	27434
Surr: Nitrobenzene-d5	55.9	0	28.8-134		%Rec	1	9/14/2016 11:05:13 PM	27434
Surr: 2-Fluorobiphenyl	50.8	0	35.9-125		%Rec	1	9/14/2016 11:05:13 PM	27434
Surr: 4-Terphenyl-d14	40.8	0	15-146		%Rec	1	9/14/2016 11:05:13 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Toluene	ND	0.12	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Naphthalene	ND	0.093	2.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Acetone	ND	4.9	10		µg/L	1	9/20/2016 5:29:24 PM	R37339
Bromobenzene	ND	0.098	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Bromoform	ND	0.10	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Bromomethane	ND	0.78	3.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
2-Butanone	ND	0.74	10		µg/L	1	9/20/2016 5:29:24 PM	R37339
Carbon disulfide	ND	0.60	10		µg/L	1	9/20/2016 5:29:24 PM	R37339
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Chloroethane	ND	0.19	2.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Chloroform	ND	0.089	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Chloromethane	ND	0.21	3.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Dibromomethane	ND	0.12	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2016 Annual

Collection Date: 9/7/2016 10:30:00 AM

Lab ID: 1609453-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
2-Hexanone	ND	0.84	10		µg/L	1	9/20/2016 5:29:24 PM	R37339
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/20/2016 5:29:24 PM	R37339
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Styrene	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/20/2016 5:29:24 PM	R37339
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/20/2016 5:29:24 PM	R37339
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	9/20/2016 5:29:24 PM	R37339
Surr: 4-Bromofluorobenzene	94.2	0	70-130		%Rec	1	9/20/2016 5:29:24 PM	R37339
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/20/2016 5:29:24 PM	R37339
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	9/20/2016 5:29:24 PM	R37339

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2016 Annual

Collection Date: 9/7/2016 10:30:00 AM

Lab ID: 1609453-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.025	0.015	0.050	J	mg/L	1	9/12/2016 11:41:04 PM	G37129
Surr: BFB	101	0	70-130		%Rec	1	9/12/2016 11:41:04 PM	G37129

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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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2016 Annual

Collection Date: 9/7/2016 2:00:00 PM

Lab ID: 1609453-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/13/2016 12:45:04 AM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/13/2016 12:45:04 AM	27430
Surr: DNOP	118	0	77.1-144		%Rec	1	9/13/2016 12:45:04 AM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.66	0.050	0.10		mg/L	1	9/12/2016 7:52:06 PM	R37143
Chloride	50	1.0	10		mg/L	20	9/12/2016 8:04:30 PM	R37143
Bromide	0.095	0.044	0.10	J	mg/L	1	9/12/2016 7:52:06 PM	R37143
Phosphorus, Orthophosphate (As P')	ND	0.076	0.50	H	mg/L	1	9/12/2016 7:52:06 PM	R37143
Sulfate	150	2.8	10		mg/L	20	9/12/2016 8:04:30 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 4:27:36 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.018	0.0013	0.0020		mg/L	1	9/23/2016 3:55:41 PM	B37443
Cadmium	ND	0.00075	0.0020		mg/L	1	9/23/2016 3:55:41 PM	B37443
Calcium	1.5	0.50	1.0		mg/L	1	9/23/2016 3:55:41 PM	B37443
Chromium	ND	0.0018	0.0060		mg/L	1	9/23/2016 3:55:41 PM	B37443
Copper	ND	0.0040	0.0060		mg/L	1	9/23/2016 3:55:41 PM	B37443
Iron	ND	0.020	0.020		mg/L	1	9/23/2016 3:55:41 PM	B37443
Magnesium	ND	0.50	1.0		mg/L	1	9/23/2016 3:55:41 PM	B37443
Manganese	0.0024	0.00032	0.0020		mg/L	1	9/23/2016 3:55:41 PM	B37443
Potassium	0.71	0.50	1.0	J	mg/L	1	9/23/2016 3:55:41 PM	B37443
Silver	ND	0.0028	0.0050		mg/L	1	9/23/2016 3:55:41 PM	B37443
Sodium	270	2.5	5.0		mg/L	5	9/23/2016 3:57:45 PM	B37443
Zinc	ND	0.0028	0.010		mg/L	1	9/23/2016 3:55:41 PM	B37443
EPA METHOD 200.7: TOTAL METALS							Analyst: ELS	
Barium	0.020	0.00079	0.0020		mg/L	1	10/3/2016 4:42:06 PM	27612
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 4:42:06 PM	27612
Chromium	ND	0.0027	0.0060		mg/L	1	10/3/2016 4:42:06 PM	27612
Copper	ND	0.0030	0.0060		mg/L	1	10/3/2016 4:42:06 PM	27612
Iron	ND	0.020	0.020		mg/L	1	10/3/2016 4:42:06 PM	27612
Manganese	0.0031	0.00027	0.0020		mg/L	1	10/3/2016 4:42:06 PM	27612
Silver	ND	0.0015	0.0050		mg/L	1	10/3/2016 4:42:06 PM	27612
Zinc	ND	0.0027	0.010		mg/L	1	10/3/2016 4:42:06 PM	27612
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0011	0.00014	0.0010		mg/L	1	9/20/2016 3:31:32 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:31:32 PM	C37327
Selenium	0.00060	0.00021	0.0010	J	mg/L	1	9/20/2016 3:31:32 PM	C37327
Uranium	0.0095	0.000051	0.00050		mg/L	1	9/20/2016 3:31:32 PM	C37327

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
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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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2016 Annual

Collection Date: 9/7/2016 2:00:00 PM

Lab ID: 1609453-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0013	0.00021	0.0010		mg/L	1	9/21/2016 5:07:05 PM	27612
Lead	ND	0.000081	0.00050		mg/L	1	9/21/2016 5:07:05 PM	27612
Selenium	0.00058	0.00019	0.0010	J	mg/L	1	9/21/2016 5:07:05 PM	27612
Uranium	0.0088	0.00017	0.00050		mg/L	1	9/21/2016 5:07:05 PM	27612
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000056	0.000053	0.00020	J	mg/L	1	9/15/2016 1:41:59 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Benzoic acid	18	2.6	20	J	µg/L	1	9/14/2016 11:33:22 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Bis(2-ethylhexyl)phthalate	3.8	2.6	10	J	µg/L	1	9/14/2016 11:33:22 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 11:33:22 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 11:33:22 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Di-n-octyl phthalate	3.5	2.0	10	J	µg/L	1	9/14/2016 11:33:22 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 11:33:22 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 11:33:22 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 11:33:22 PM	27434

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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2016 Annual

Collection Date: 9/7/2016 2:00:00 PM

Lab ID: 1609453-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Dimethyl phthalate	5.0	2.4	10	J	µg/L	1	9/14/2016 11:33:22 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 11:33:22 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 11:33:22 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 11:33:22 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 11:33:22 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 11:33:22 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 11:33:22 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 11:33:22 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 11:33:22 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 11:33:22 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Pentachlorophenol	3.9	2.3	20	J	µg/L	1	9/14/2016 11:33:22 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Pyrene	5.2	3.1	10	J	µg/L	1	9/14/2016 11:33:22 PM	27434
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 11:33:22 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 11:33:22 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 11:33:22 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2016 Annual

Collection Date: 9/7/2016 2:00:00 PM

Lab ID: 1609453-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 11:33:22 PM	27434
Surr: 2-Fluorophenol	21.4	0	15-123		%Rec	1	9/14/2016 11:33:22 PM	27434
Surr: Phenol-d5	19.4	0	15-124		%Rec	1	9/14/2016 11:33:22 PM	27434
Surr: 2,4,6-Tribromophenol	37.4	0	18.4-134		%Rec	1	9/14/2016 11:33:22 PM	27434
Surr: Nitrobenzene-d5	49.6	0	28.8-134		%Rec	1	9/14/2016 11:33:22 PM	27434
Surr: 2-Fluorobiphenyl	42.8	0	35.9-125		%Rec	1	9/14/2016 11:33:22 PM	27434
Surr: 4-Terphenyl-d14	35.6	0	15-146		%Rec	1	9/14/2016 11:33:22 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Toluene	ND	0.12	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Naphthalene	ND	0.093	2.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Acetone	ND	4.9	10		µg/L	1	9/20/2016 5:58:04 PM	R37339
Bromobenzene	ND	0.098	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Bromoform	ND	0.10	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Bromomethane	ND	0.78	3.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
2-Butanone	ND	0.74	10		µg/L	1	9/20/2016 5:58:04 PM	R37339
Carbon disulfide	ND	0.60	10		µg/L	1	9/20/2016 5:58:04 PM	R37339
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Chloroethane	ND	0.19	2.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Chloroform	ND	0.089	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Chloromethane	ND	0.21	3.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Dibromomethane	ND	0.12	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2016 Annual

Collection Date: 9/7/2016 2:00:00 PM

Lab ID: 1609453-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
2-Hexanone	ND	0.84	10		µg/L	1	9/20/2016 5:58:04 PM	R37339
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/20/2016 5:58:04 PM	R37339
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Styrene	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/20/2016 5:58:04 PM	R37339
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/20/2016 5:58:04 PM	R37339
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	9/20/2016 5:58:04 PM	R37339
Surr: 4-Bromofluorobenzene	93.9	0	70-130		%Rec	1	9/20/2016 5:58:04 PM	R37339
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/20/2016 5:58:04 PM	R37339
Surr: Toluene-d8	102	0	70-130		%Rec	1	9/20/2016 5:58:04 PM	R37339

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2016 Annual

Collection Date: 9/7/2016 2:00:00 PM

Lab ID: 1609453-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.021	0.015	0.050	J	mg/L	1	9/13/2016 12:09:54 AM	G37129
Surr: BFB	95.8	0	70-130		%Rec	1	9/13/2016 12:09:54 AM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2016 Annual

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609453-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/13/2016 1:12:49 AM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/13/2016 1:12:49 AM	27430
Surr: DNOP	117	0	77.1-144		%Rec	1	9/13/2016 1:12:49 AM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.65	0.050	0.10		mg/L	1	9/12/2016 8:41:44 PM	R37143
Chloride	56	1.0	10		mg/L	20	9/12/2016 8:54:09 PM	R37143
Bromide	0.095	0.044	0.10	J	mg/L	1	9/12/2016 8:41:44 PM	R37143
Phosphorus, Orthophosphate (As P _i)	ND	0.076	0.50	H	mg/L	1	9/12/2016 8:41:44 PM	R37143
Sulfate	160	2.8	10		mg/L	20	9/12/2016 8:54:09 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 4:40:00 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.017	0.0013	0.0020		mg/L	1	9/23/2016 3:59:35 PM	B37443
Cadmium	ND	0.00075	0.0020		mg/L	1	9/23/2016 3:59:35 PM	B37443
Calcium	1.4	0.50	1.0		mg/L	1	9/23/2016 3:59:35 PM	B37443
Chromium	ND	0.0018	0.0060		mg/L	1	9/23/2016 3:59:35 PM	B37443
Copper	ND	0.0040	0.0060		mg/L	1	9/23/2016 3:59:35 PM	B37443
Iron	ND	0.020	0.020		mg/L	1	9/23/2016 3:59:35 PM	B37443
Magnesium	ND	0.50	1.0		mg/L	1	9/23/2016 3:59:35 PM	B37443
Manganese	0.0035	0.00032	0.0020		mg/L	1	9/23/2016 3:59:35 PM	B37443
Potassium	0.67	0.50	1.0	J	mg/L	1	9/23/2016 3:59:35 PM	B37443
Silver	ND	0.0028	0.0050		mg/L	1	9/23/2016 3:59:35 PM	B37443
Sodium	270	2.5	5.0		mg/L	5	9/23/2016 4:01:39 PM	B37443
Zinc	ND	0.0028	0.010		mg/L	1	9/23/2016 3:59:35 PM	B37443
EPA METHOD 200.7: TOTAL METALS							Analyst: ELS	
Barium	0.041	0.00079	0.0020		mg/L	1	10/3/2016 4:46:00 PM	27612
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 4:46:00 PM	27612
Chromium	ND	0.0027	0.0060		mg/L	1	10/3/2016 4:46:00 PM	27612
Copper	ND	0.0030	0.0060		mg/L	1	10/3/2016 4:46:00 PM	27612
Iron	ND	0.020	0.020		mg/L	1	10/3/2016 4:46:00 PM	27612
Manganese	0.0046	0.00027	0.0020		mg/L	1	10/3/2016 4:46:00 PM	27612
Silver	ND	0.0015	0.0050		mg/L	1	10/3/2016 4:46:00 PM	27612
Zinc	ND	0.0027	0.010		mg/L	1	10/3/2016 4:46:00 PM	27612
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0010	0.00014	0.0010		mg/L	1	9/20/2016 3:34:36 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:34:36 PM	C37327
Selenium	0.00050	0.00021	0.0010	J	mg/L	1	9/20/2016 3:34:36 PM	C37327
Uranium	0.0094	0.000051	0.00050		mg/L	1	9/20/2016 3:34:36 PM	C37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2016 Annual

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609453-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0012	0.00021	0.0010		mg/L	1	9/21/2016 5:13:07 PM	27612
Lead	ND	0.000081	0.00050		mg/L	1	9/21/2016 5:13:07 PM	27612
Selenium	0.00038	0.00019	0.0010	J	mg/L	1	9/21/2016 5:13:07 PM	27612
Uranium	0.0092	0.00017	0.00050		mg/L	1	9/21/2016 5:13:07 PM	27612
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000055	0.000053	0.00020	J	mg/L	1	9/15/2016 1:44:03 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Aniline	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Anthracene	ND	2.5	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Benzoic acid	6.5	2.6	20	J	µg/L	1	9/15/2016 12:01:32 AM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Bis(2-ethylhexyl)phthalate	3.3	2.6	10	J	µg/L	1	9/15/2016 12:01:32 AM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Carbazole	ND	2.3	10		µg/L	1	9/15/2016 12:01:32 AM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/15/2016 12:01:32 AM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Chrysene	ND	2.8	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Di-n-octyl phthalate	3.4	2.0	10	J	µg/L	1	9/15/2016 12:01:32 AM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/15/2016 12:01:32 AM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/15/2016 12:01:32 AM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/15/2016 12:01:32 AM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2016 Annual

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609453-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Dimethyl phthalate	5.1	2.4	10	J	µg/L	1	9/15/2016 12:01:32 AM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/15/2016 12:01:32 AM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/15/2016 12:01:32 AM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/15/2016 12:01:32 AM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/15/2016 12:01:32 AM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Fluorene	ND	2.7	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Isophorone	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/15/2016 12:01:32 AM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/15/2016 12:01:32 AM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/15/2016 12:01:32 AM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/15/2016 12:01:32 AM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/15/2016 12:01:32 AM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/15/2016 12:01:32 AM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Phenol	ND	2.0	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Pyrene	ND	3.1	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Pyridine	ND	2.2	10		µg/L	1	9/15/2016 12:01:32 AM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/15/2016 12:01:32 AM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/15/2016 12:01:32 AM	27434

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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2016 Annual

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609453-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/15/2016 12:01:32 AM	27434
Surr: 2-Fluorophenol	10.2	0	15-123	S	%Rec	1	9/15/2016 12:01:32 AM	27434
Surr: Phenol-d5	10.7	0	15-124	S	%Rec	1	9/15/2016 12:01:32 AM	27434
Surr: 2,4,6-Tribromophenol	15.1	0	18.4-134	S	%Rec	1	9/15/2016 12:01:32 AM	27434
Surr: Nitrobenzene-d5	29.4	0	28.8-134		%Rec	1	9/15/2016 12:01:32 AM	27434
Surr: 2-Fluorobiphenyl	23.4	0	35.9-125	S	%Rec	1	9/15/2016 12:01:32 AM	27434
Surr: 4-Terphenyl-d14	21.1	0	15-146		%Rec	1	9/15/2016 12:01:32 AM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Toluene	ND	0.12	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Naphthalene	ND	0.093	2.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Acetone	ND	4.9	10		µg/L	1	9/20/2016 6:26:42 PM	R37339
Bromobenzene	ND	0.098	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Bromoform	ND	0.10	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Bromomethane	ND	0.78	3.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
2-Butanone	ND	0.74	10		µg/L	1	9/20/2016 6:26:42 PM	R37339
Carbon disulfide	ND	0.60	10		µg/L	1	9/20/2016 6:26:42 PM	R37339
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Chloroethane	ND	0.19	2.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Chloroform	ND	0.089	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Chloromethane	ND	0.21	3.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Dibromomethane	ND	0.12	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2016 Annual

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609453-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
2-Hexanone	ND	0.84	10		µg/L	1	9/20/2016 6:26:42 PM	R37339
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/20/2016 6:26:42 PM	R37339
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Styrene	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/20/2016 6:26:42 PM	R37339
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/20/2016 6:26:42 PM	R37339
Surr: 1,2-Dichloroethane-d4	96.8	0	70-130		%Rec	1	9/20/2016 6:26:42 PM	R37339
Surr: 4-Bromofluorobenzene	98.1	0	70-130		%Rec	1	9/20/2016 6:26:42 PM	R37339
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	9/20/2016 6:26:42 PM	R37339
Surr: Toluene-d8	97.8	0	70-130		%Rec	1	9/20/2016 6:26:42 PM	R37339

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2016 Annual

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609453-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.027	0.015	0.050	J	mg/L	1	9/13/2016 12:38:42 AM	G37129
Surr: BFB	101	0	70-130		%Rec	1	9/13/2016 12:38:42 AM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2016 Annual

Collection Date: 9/7/2016 5:40:00 PM

Lab ID: 1609453-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/13/2016 1:40:18 AM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/13/2016 1:40:18 AM	27430
Surr: DNOP	118	0	77.1-144		%Rec	1	9/13/2016 1:40:18 AM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.21	0.050	0.10		mg/L	1	9/12/2016 9:06:34 PM	R37143
Chloride	18	0.051	0.50		mg/L	1	9/12/2016 9:06:34 PM	R37143
Bromide	0.13	0.044	0.10		mg/L	1	9/12/2016 9:06:34 PM	R37143
Phosphorus, Orthophosphate (As P')	ND	0.076	0.50	H	mg/L	1	9/12/2016 9:06:34 PM	R37143
Sulfate	140	2.8	10		mg/L	20	9/12/2016 9:18:59 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/17/2016 4:52:25 PM	R37294
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.020	0.0013	0.0020		mg/L	1	9/23/2016 4:03:27 PM	B37443
Cadmium	ND	0.00075	0.0020		mg/L	1	9/23/2016 4:03:27 PM	B37443
Calcium	1.8	0.50	1.0		mg/L	1	9/23/2016 4:03:27 PM	B37443
Chromium	ND	0.0018	0.0060		mg/L	1	9/23/2016 4:03:27 PM	B37443
Copper	ND	0.0040	0.0060		mg/L	1	9/23/2016 4:03:27 PM	B37443
Iron	ND	0.020	0.020		mg/L	1	9/23/2016 4:03:27 PM	B37443
Magnesium	ND	0.50	1.0		mg/L	1	9/23/2016 4:03:27 PM	B37443
Manganese	0.0046	0.00032	0.0020		mg/L	1	9/23/2016 4:03:27 PM	B37443
Potassium	0.81	0.50	1.0	J	mg/L	1	9/23/2016 4:03:27 PM	B37443
Silver	ND	0.0028	0.0050		mg/L	1	9/23/2016 4:03:27 PM	B37443
Sodium	300	2.5	5.0		mg/L	5	9/23/2016 4:05:31 PM	B37443
Zinc	ND	0.0028	0.010		mg/L	1	9/23/2016 4:03:27 PM	B37443
EPA METHOD 200.7: TOTAL METALS							Analyst: ELS	
Barium	0.022	0.00079	0.0020		mg/L	1	10/3/2016 4:49:54 PM	27612
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 4:49:54 PM	27612
Chromium	ND	0.0027	0.0060		mg/L	1	10/3/2016 4:49:54 PM	27612
Copper	ND	0.0030	0.0060		mg/L	1	10/3/2016 4:49:54 PM	27612
Iron	0.028	0.020	0.020		mg/L	1	10/3/2016 4:49:54 PM	27612
Manganese	0.0064	0.00027	0.0020		mg/L	1	10/3/2016 4:49:54 PM	27612
Silver	ND	0.0015	0.0050		mg/L	1	10/3/2016 4:49:54 PM	27612
Zinc	ND	0.0027	0.010		mg/L	1	10/3/2016 4:49:54 PM	27612
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.00089	0.00014	0.0010	J	mg/L	1	9/20/2016 3:37:39 PM	C37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 3:37:39 PM	C37327
Selenium	0.00072	0.00021	0.0010	J	mg/L	1	9/20/2016 3:37:39 PM	C37327
Uranium	0.017	0.000051	0.00050		mg/L	1	9/20/2016 3:37:39 PM	C37327

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	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2016 Annual

Collection Date: 9/7/2016 5:40:00 PM

Lab ID: 1609453-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.00098	0.00021	0.0010	J	mg/L	1	9/21/2016 5:22:08 PM	27612
Lead	0.00017	0.000081	0.00050	J	mg/L	1	9/21/2016 5:22:08 PM	27612
Selenium	0.00065	0.00019	0.0010	J	mg/L	1	9/21/2016 5:22:08 PM	27612
Uranium	0.016	0.00017	0.00050		mg/L	1	9/21/2016 5:22:08 PM	27612
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	ND	0.000053	0.00020		mg/L	1	9/15/2016 1:46:08 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Aniline	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Anthracene	ND	2.5	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Benzoic acid	9.3	2.6	20	J	µg/L	1	9/15/2016 12:29:42 AM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Bis(2-ethylhexyl)phthalate	3.5	2.6	10	J	µg/L	1	9/15/2016 12:29:42 AM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Carbazole	ND	2.3	10		µg/L	1	9/15/2016 12:29:42 AM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/15/2016 12:29:42 AM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Chrysene	ND	2.8	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Di-n-octyl phthalate	3.7	2.0	10	J	µg/L	1	9/15/2016 12:29:42 AM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/15/2016 12:29:42 AM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/15/2016 12:29:42 AM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/15/2016 12:29:42 AM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2016 Annual

Collection Date: 9/7/2016 5:40:00 PM

Lab ID: 1609453-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Dimethyl phthalate	4.5	2.4	10	J	µg/L	1	9/15/2016 12:29:42 AM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/15/2016 12:29:42 AM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/15/2016 12:29:42 AM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/15/2016 12:29:42 AM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/15/2016 12:29:42 AM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Fluorene	ND	2.7	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Isophorone	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/15/2016 12:29:42 AM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/15/2016 12:29:42 AM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/15/2016 12:29:42 AM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/15/2016 12:29:42 AM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/15/2016 12:29:42 AM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/15/2016 12:29:42 AM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Phenol	ND	2.0	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Pyrene	3.2	3.1	10	J	µg/L	1	9/15/2016 12:29:42 AM	27434
Pyridine	ND	2.2	10		µg/L	1	9/15/2016 12:29:42 AM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/15/2016 12:29:42 AM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/15/2016 12:29:42 AM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2016 Annual

Collection Date: 9/7/2016 5:40:00 PM

Lab ID: 1609453-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/15/2016 12:29:42 AM	27434
Surr: 2-Fluorophenol	20.2	0	15-123		%Rec	1	9/15/2016 12:29:42 AM	27434
Surr: Phenol-d5	18.7	0	15-124		%Rec	1	9/15/2016 12:29:42 AM	27434
Surr: 2,4,6-Tribromophenol	37.9	0	18.4-134		%Rec	1	9/15/2016 12:29:42 AM	27434
Surr: Nitrobenzene-d5	49.3	0	28.8-134		%Rec	1	9/15/2016 12:29:42 AM	27434
Surr: 2-Fluorobiphenyl	49.0	0	35.9-125		%Rec	1	9/15/2016 12:29:42 AM	27434
Surr: 4-Terphenyl-d14	37.6	0	15-146		%Rec	1	9/15/2016 12:29:42 AM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Toluene	ND	0.12	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Naphthalene	ND	0.093	2.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Acetone	ND	4.9	10		µg/L	1	9/20/2016 6:55:26 PM	R37339
Bromobenzene	ND	0.098	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Bromoform	ND	0.10	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Bromomethane	ND	0.78	3.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
2-Butanone	ND	0.74	10		µg/L	1	9/20/2016 6:55:26 PM	R37339
Carbon disulfide	ND	0.60	10		µg/L	1	9/20/2016 6:55:26 PM	R37339
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Chloroethane	ND	0.19	2.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Chloroform	ND	0.089	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Chloromethane	ND	0.21	3.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Dibromomethane	ND	0.12	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339

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
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2016 Annual

Collection Date: 9/7/2016 5:40:00 PM

Lab ID: 1609453-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
2-Hexanone	ND	0.84	10		µg/L	1	9/20/2016 6:55:26 PM	R37339
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/20/2016 6:55:26 PM	R37339
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Styrene	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/20/2016 6:55:26 PM	R37339
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/20/2016 6:55:26 PM	R37339
Surr: 1,2-Dichloroethane-d4	97.3	0	70-130		%Rec	1	9/20/2016 6:55:26 PM	R37339
Surr: 4-Bromofluorobenzene	99.2	0	70-130		%Rec	1	9/20/2016 6:55:26 PM	R37339
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	9/20/2016 6:55:26 PM	R37339
Surr: Toluene-d8	100	0	70-130		%Rec	1	9/20/2016 6:55:26 PM	R37339

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2016 Annual

Collection Date: 9/7/2016 5:40:00 PM

Lab ID: 1609453-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.020	0.015	0.050	J	mg/L	1	9/13/2016 1:07:29 AM	G37129
Surr: BFB	96.7	0	70-130		%Rec	1	9/13/2016 1:07:29 AM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 Annual

Collection Date:

Lab ID: 1609453-006

Matrix: TRIP BLANK

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Toluene	ND	0.12	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Naphthalene	ND	0.093	2.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Acetone	ND	4.9	10		µg/L	1	9/20/2016 7:24:08 PM	R37339
Bromobenzene	ND	0.098	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Bromoform	ND	0.10	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Bromomethane	ND	0.78	3.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
2-Butanone	ND	0.74	10		µg/L	1	9/20/2016 7:24:08 PM	R37339
Carbon disulfide	ND	0.60	10		µg/L	1	9/20/2016 7:24:08 PM	R37339
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Chloroethane	ND	0.19	2.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Chloroform	ND	0.089	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Chloromethane	ND	0.21	3.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Dibromomethane	ND	0.12	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/20/2016 7:24:08 PM	R37339

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 Annual

Collection Date:

Lab ID: 1609453-006

Matrix: TRIP BLANK

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
2-Hexanone	ND	0.84	10		µg/L	1	9/20/2016 7:24:08 PM	R37339
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/20/2016 7:24:08 PM	R37339
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Styrene	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/20/2016 7:24:08 PM	R37339
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/20/2016 7:24:08 PM	R37339
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	9/20/2016 7:24:08 PM	R37339
Surr: 4-Bromofluorobenzene	99.7	0	70-130		%Rec	1	9/20/2016 7:24:08 PM	R37339
Surr: Dibromofluoromethane	99.2	0	70-130		%Rec	1	9/20/2016 7:24:08 PM	R37339
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	9/20/2016 7:24:08 PM	R37339

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 2016 Annual

Collection Date:

Lab ID: 1609453-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Toluene	ND	0.12	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Naphthalene	ND	0.093	2.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Acetone	ND	4.9	10		µg/L	1	9/20/2016 7:53:00 PM	R37339
Bromobenzene	ND	0.098	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Bromoform	ND	0.10	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Bromomethane	ND	0.78	3.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
2-Butanone	ND	0.74	10		µg/L	1	9/20/2016 7:53:00 PM	R37339
Carbon disulfide	ND	0.60	10		µg/L	1	9/20/2016 7:53:00 PM	R37339
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Chloroethane	ND	0.19	2.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Chloroform	ND	0.089	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Chloromethane	ND	0.21	3.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Dibromomethane	ND	0.12	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/20/2016 7:53:00 PM	R37339

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609453

Date Reported: 10/21/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 2016 Annual

Collection Date:

Lab ID: 1609453-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
2-Hexanone	ND	0.84	10		µg/L	1	9/20/2016 7:53:00 PM	R37339
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/20/2016 7:53:00 PM	R37339
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Styrene	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/20/2016 7:53:00 PM	R37339
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/20/2016 7:53:00 PM	R37339
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	9/20/2016 7:53:00 PM	R37339
Surr: 4-Bromofluorobenzene	94.9	0	70-130		%Rec	1	9/20/2016 7:53:00 PM	R37339
Surr: Dibromofluoromethane	94.7	0	70-130		%Rec	1	9/20/2016 7:53:00 PM	R37339
Surr: Toluene-d8	96.8	0	70-130		%Rec	1	9/20/2016 7:53:00 PM	R37339

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB **Batch #:** 160913041
Address: 4901 HAWKINS NE SUITE D **Project Name:** 1609453
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Analytical Results Report

Sample Number	160913041-001	Sampling Date	9/7/2016	Date/Time Received	9/13/2016	11:40 AM
Client Sample ID	1609453-001G / SMW-4	Sampling Time	8:30 AM			
Matrix	Water					
Comments						

Sample Number	160913041-002	Sampling Date	9/7/2016	Date/Time Received	9/13/2016	11:40 AM	
Client Sample ID	1609453-002G / MW-1	Sampling Time	10:30 AM				
Matrix	Water						
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/14/2016	MER	EPA 335.4	

Sample Number	160913041-003	Sampling Date	9/7/2016	Date/Time Received	9/13/2016	11:40 AM	
Client Sample ID	1609453-003G / MW-2	Sampling Time	2:00 PM				
Matrix	Water						
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/20/2016	MER	EPA 335.4	

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 160913041
Project Name: 1609453

Analytical Results Report

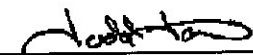
Sample Number	160913041-004	Sampling Date	9/7/2016	Date/Time Received	9/13/2016 11:40 AM
Client Sample ID	1609453-004G / MW-5	Sampling Time	3:45 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/20/2016	MER	EPA 335.4	

Sample Number	160913041-005	Sampling Date	9/7/2016	Date/Time Received	9/13/2016 11:40 AM
Client Sample ID	1609453-005G / MW-4	Sampling Time	5:40 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/20/2016	MER	EPA 335.4	

Authorized Signature



Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Thursday, September 22, 2016

Page 2 of 2

Anatek Labs, Inc.

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 160913041
Project Name: 1609453

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.518	mg/L	0.5	103.6	90-110	9/20/2016	9/20/2016
Cyanide	0.513	mg/L	0.5	102.6	90-110	9/14/2016	9/14/2016

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
160913041-003	Cyanide	ND	0.494	mg/L	0.5	98.8	90-110	9/20/2016	9/20/2016
160908027-002	Cyanide	ND	0.509	mg/L	0.5	101.8	90-110	9/14/2016	9/14/2016

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.475	mg/L	0.5	95.0	3.9	0-20	9/20/2016	9/20/2016
Cyanide	0.494	mg/L	0.5	98.8	3.0	0-20	9/14/2016	9/14/2016

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/20/2016	9/20/2016
Cyanide	ND	mg/L	0.01	9/14/2016	9/14/2016

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA-ID00013; AZ-0701; FL(NELAP):E87893; ID-ID00013; MT-CERT0028; NM: ID00013; NV-ID00013; OR-ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID MB-B	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: B37443		RunNo: 37443							
Prep Date:	Analysis Date: 9/23/2016		SeqNo: 1164053		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								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID LCS-B	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: B37443		RunNo: 37443							
Prep Date:	Analysis Date: 9/23/2016		SeqNo: 1164054		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	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Calcium	51	1.0	50.00	0	102	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Copper	0.48	0.0060	0.5000	0	95.9	85	115			
Iron	0.48	0.020	0.5000	0	95.7	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.48	0.0020	0.5000	0	96.2	85	115			
Potassium	49	1.0	50.00	0	98.6	85	115			
Silver	0.099	0.0050	0.1000	0	98.7	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Zinc	0.48	0.010	0.5000	0	96.1	85	115			

Sample ID LLCS-B	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: B37443		RunNo: 37443							
Prep Date:	Analysis Date: 9/23/2016		SeqNo: 1164055		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	112	50	150			
Cadmium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Calcium	0.57	1.0	0.5000	0	114	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID LLLCS-B	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: B37443		RunNo: 37443							
Prep Date:	Analysis Date: 9/23/2016		SeqNo: 1164055		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0064	0.0060	0.006000	0	106	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.56	1.0	0.5000	0	112	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Potassium	0.54	1.0	0.5000	0	108	50	150			J
Silver	0.0052	0.0050	0.005000	0	103	50	150			
Sodium	0.56	1.0	0.5000	0	112	50	150			J
Zinc	0.0062	0.010	0.005000	0	124	50	150			J

Sample ID 1609453-001EMS	SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: SMW-4	Batch ID: B37443		RunNo: 37443							
Prep Date:	Analysis Date: 9/23/2016		SeqNo: 1164187		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0.01935	101	70	130			
Cadmium	0.52	0.0020	0.5000	0	103	70	130			
Calcium	55	1.0	50.00	3.542	104	70	130			
Chromium	0.50	0.0060	0.5000	0.002770	99.8	70	130			
Copper	0.53	0.0060	0.5000	0	106	70	130			
Iron	0.62	0.020	0.5000	0.07846	109	70	130			
Magnesium	54	1.0	50.00	0.8684	107	70	130			
Manganese	0.50	0.0020	0.5000	0.006370	99.4	70	130			
Potassium	53	1.0	50.00	0.5731	105	70	130			
Silver	0.093	0.0050	0.1000	0	93.1	70	130			
Zinc	0.50	0.010	0.5000	0.002920	100	70	130			

Sample ID 1609453-001EMSD	SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: SMW-4	Batch ID: B37443		RunNo: 37443							
Prep Date:	Analysis Date: 9/23/2016		SeqNo: 1164188		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.01935	98.7	70	130	2.19	20	
Cadmium	0.51	0.0020	0.5000	0	101	70	130	2.17	20	
Calcium	57	1.0	50.00	3.542	107	70	130	2.66	20	
Chromium	0.49	0.0060	0.5000	0.002770	98.2	70	130	1.53	20	
Copper	0.52	0.0060	0.5000	0	104	70	130	2.49	20	
Iron	0.62	0.020	0.5000	0.07846	108	70	130	0.989	20	
Magnesium	56	1.0	50.00	0.8684	110	70	130	2.73	20	
Manganese	0.49	0.0020	0.5000	0.006370	97.0	70	130	2.45	20	
Potassium	55	1.0	50.00	0.5731	108	70	130	2.78	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 |
| R RPD outside accepted recovery limits | 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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609453-001EMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	SMW-4		Batch ID: B37443		RunNo: 37443					
Prep Date:			Analysis Date: 9/23/2016		SeqNo: 1164188		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.097	0.0050	0.1000	0	97.0	70	130	4.03	20	
Zinc	0.50	0.010	0.5000	0.002920	98.6	70	130	1.55	20	

Sample ID	1609453-002EMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	MW-1		Batch ID: B37443		RunNo: 37443					
Prep Date:			Analysis Date: 9/23/2016		SeqNo: 1164193		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.01137	98.9	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.2	70	130			
Calcium	55	1.0	50.00	1.577	107	70	130			
Chromium	0.49	0.0060	0.5000	0	97.1	70	130			
Copper	0.51	0.0060	0.5000	0	102	70	130			
Iron	0.48	0.020	0.5000	0	95.6	70	130			
Magnesium	54	1.0	50.00	0	107	70	130			
Manganese	0.49	0.0020	0.5000	0.003070	97.4	70	130			
Potassium	53	1.0	50.00	0.7094	104	70	130			
Silver	0.095	0.0050	0.1000	0	95.5	70	130			
Zinc	0.50	0.010	0.5000	0	99.5	70	130			

Sample ID	1609453-002EMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	MW-1		Batch ID: B37443		RunNo: 37443					
Prep Date:			Analysis Date: 9/23/2016		SeqNo: 1164194		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.01137	101	70	130	1.71	20	
Cadmium	0.52	0.0020	0.5000	0	104	70	130	4.32	20	
Calcium	54	1.0	50.00	1.577	105	70	130	1.17	20	
Chromium	0.51	0.0060	0.5000	0	101	70	130	4.08	20	
Copper	0.52	0.0060	0.5000	0	104	70	130	2.22	20	
Iron	0.50	0.020	0.5000	0	100	70	130	4.72	20	
Magnesium	53	1.0	50.00	0	106	70	130	1.44	20	
Manganese	0.50	0.0020	0.5000	0.003070	99.2	70	130	1.81	20	
Potassium	52	1.0	50.00	0.7094	103	70	130	1.20	20	
Silver	0.094	0.0050	0.1000	0	93.6	70	130	1.95	20	
Zinc	0.52	0.010	0.5000	0	104	70	130	4.35	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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27612		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 27612		RunNo: 37369					
Prep Date:	9/20/2016		Analysis Date: 9/21/2016		SeqNo: 1161349		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								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-27612		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 27612		RunNo: 37369					
Prep Date:	9/20/2016		Analysis Date: 9/21/2016		SeqNo: 1161350		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.3	85	115			
Chromium	0.47	0.0060	0.5000	0	94.2	85	115			
Copper	0.47	0.0060	0.5000	0	93.1	85	115			
Iron	0.47	0.020	0.5000	0	94.2	85	115			
Manganese	0.46	0.0020	0.5000	0	93.0	85	115			
Silver	0.098	0.0050	0.1000	0	97.7	85	115			
Zinc	0.47	0.010	0.5000	0	93.3	85	115			

Sample ID	LLLCS-27612		SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 27612		RunNo: 37369					
Prep Date:	9/20/2016		Analysis Date: 9/21/2016		SeqNo: 1161351		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	130	50	150			
Cadmium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.7	50	150			J
Copper	0.0054	0.0060	0.006000	0	90.7	50	150			J
Iron	0.021	0.020	0.02000	0	105	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.5	50	150			J
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J
Zinc	0.0051	0.010	0.005000	0	102	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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609453-001FMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	SMW-4		Batch ID:	27612		RunNo:	37643			
Prep Date:	9/20/2016		Analysis Date:	10/3/2016		SeqNo:	1171683		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.04321	105	70	130			
Cadmium	0.52	0.0020	0.5000	0	105	70	130			
Chromium	0.55	0.0060	0.5000	0.03634	103	70	130			
Copper	0.55	0.0060	0.5000	0.009940	108	70	130			
Manganese	0.55	0.0020	0.5000	0.03537	103	70	130			
Zinc	0.54	0.010	0.5000	0.01144	106	70	130			

Sample ID	1609453-001FMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	SMW-4		Batch ID:	27612		RunNo:	37643			
Prep Date:	9/20/2016		Analysis Date:	10/3/2016		SeqNo:	1171687		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.04321	106	70	130	1.00	20	
Cadmium	0.53	0.0020	0.5000	0	105	70	130	0.746	20	
Chromium	0.55	0.0060	0.5000	0.03634	103	70	130	0.395	20	
Copper	0.55	0.0060	0.5000	0.009940	108	70	130	0.127	20	
Manganese	0.56	0.0020	0.5000	0.03537	104	70	130	1.07	20	
Zinc	0.55	0.010	0.5000	0.01144	107	70	130	1.04	20	

Sample ID	1609453-002FMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	MW-1		Batch ID:	27612		RunNo:	37643			
Prep Date:	9/20/2016		Analysis Date:	10/3/2016		SeqNo:	1171692		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0.01162	103	70	130			
Cadmium	0.51	0.0020	0.5000	0	103	70	130			
Chromium	0.51	0.0060	0.5000	0	102	70	130			
Copper	0.54	0.0060	0.5000	0	108	70	130			
Iron	0.53	0.020	0.5000	0	106	70	130			
Manganese	0.51	0.0020	0.5000	0.003190	102	70	130			
Zinc	0.52	0.010	0.5000	0	103	70	130			

Sample ID	1609453-002FMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	MW-1		Batch ID:	27612		RunNo:	37643			
Prep Date:	9/20/2016		Analysis Date:	10/3/2016		SeqNo:	1171693		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0.01162	102	70	130	1.66	20	
Cadmium	0.51	0.0020	0.5000	0	103	70	130	0.263	20	
Chromium	0.51	0.0060	0.5000	0	101	70	130	0.312	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 |
| R RPD outside accepted recovery limits | 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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609453-002FMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	MW-1		Batch ID: 27612		RunNo: 37643					
Prep Date:	9/20/2016		Analysis Date: 10/3/2016		SeqNo: 1171693		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.53	0.0060	0.5000	0	106	70	130	1.64	20	
Iron	0.52	0.020	0.5000	0	104	70	130	1.80	20	
Manganese	0.50	0.0020	0.5000	0.003190	100	70	130	1.96	20	
Zinc	0.51	0.010	0.5000	0	101	70	130	1.84	20	

Sample ID	1609453-001FMS			SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	SMW-4			Batch ID:	27612		RunNo:	37678			
Prep Date:	9/20/2016			Analysis Date:	10/4/2016		SeqNo:	1173205		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	1.9	0.10	0.5000	1.631	60.2	70	130			S	
Silver	0.027	0.025	0.1000	0	26.8	70	130			S	

Sample ID	1609453-001FMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	SMW-4			Batch ID:	27612		RunNo:	37678			
Prep Date:	9/20/2016			Analysis Date:	10/4/2016		SeqNo:	1173206		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	2.1	0.10	0.5000	1.631	89.9	70	130	7.41	20		
Silver	0.027	0.025	0.1000	0	27.4	70	130	2.58	20	S	

Sample ID	1609453-001FPS			SampType:	PS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	SMW-4			Batch ID:	27612		RunNo:	37678			
Prep Date:				Analysis Date:	10/4/2016		SeqNo:	1173207		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	4.2	0.10	2.500	1.631	103	85	115				
Silver	0.49	0.025	0.5000	0	97.4	85	115				

Sample ID	MB-27933		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 27933		RunNo: 37917					
Prep Date:	10/6/2016		Analysis Date: 10/12/2016		SeqNo: 1181446		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

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 |
| R RPD outside accepted recovery limits | 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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LLLCS-27933			SampType:	LCSLL			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	BatchQC			Batch ID:	27933			RunNo:	37917		
Prep Date:	10/6/2016			Analysis Date:	10/12/2016			SeqNo:	1181447		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.0055	0.0050	0.005000	0	111	50	150				

Sample ID	LCS-27933			SampType:	LCS			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	LCSW			Batch ID:	27933			RunNo:	37917		
Prep Date:	10/6/2016			Analysis Date:	10/12/2016			SeqNo:	1181448		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.11	0.0050	0.1000	0	107	85	115				

Sample ID	1609453-002FMS			SampType:	MS			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	MW-1			Batch ID:	27933			RunNo:	37917		
Prep Date:	10/6/2016			Analysis Date:	10/12/2016			SeqNo:	1181453		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.030	0.0050	0.1000	0	30.2	70	130			S	

Sample ID	1609453-002FMSD			SampType:	MSD			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	MW-1			Batch ID:	27933			RunNo:	37917		
Prep Date:	10/6/2016			Analysis Date:	10/12/2016			SeqNo:	1181454		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.032	0.0050	0.1000	0	31.9	70	130	5.51	20	S	

Sample ID	1609453-002PS			SampType:	PS			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	BatchQC			Batch ID:	27933			RunNo:	37917		
Prep Date:				Analysis Date:	10/12/2016			SeqNo:	1181455		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.094	0.0050	0.1000	0	94.3	85	115				

Sample ID	MB-27933			SampType:	MBLK			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	PBW			Batch ID:	27933			RunNo:	37801		
Prep Date:	10/6/2016			Analysis Date:	10/8/2016			SeqNo:	1186876		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	ND	0.0050									

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 |
| R RPD outside accepted recovery limits | 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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LCS-27933		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 27933		RunNo: 37801					
Prep Date:	10/6/2016		Analysis Date: 10/8/2016		SeqNo: 1186877		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	100	85	115			

Sample ID	LLCS-27933		SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 27933		RunNo: 37801					
Prep Date:	10/6/2016		Analysis Date: 10/8/2016		SeqNo: 1186878		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0060	0.0050	0.005000	0	119	50	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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609446-02AMSDLL				SampType:	MSD		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	BatchQC				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160730	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.0001542	98.6	70	130	3.20	20		
Lead	0.013	0.00050	0.01250	0.0005561	99.9	70	130	0.672	20		
Selenium	0.026	0.0010	0.02500	0.001529	99.7	70	130	5.30	20		
Uranium	0.015	0.00050	0.01250	0.001591	103	70	130	0.746	20		

Sample ID	LCS				SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	LCSW				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160759	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	91.8	85	115				
Lead	0.012	0.00050	0.01250	0	95.4	85	115				
Selenium	0.023	0.0010	0.02500	0	92.7	85	115				
Uranium	0.012	0.00050	0.01250	0	96.1	85	115				

Sample ID	LLLCS				SampType:	LCSLL		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	BatchQC				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160761	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.00097	0.0010	0.001000	0	96.9	50	150			J	
Lead	0.00051	0.00050	0.0005000	0	102	50	150				
Selenium	0.00094	0.0010	0.001000	0	93.5	50	150			J	
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J	

Sample ID	MB				SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	PBW				Batch ID:	C37327		RunNo:	37327		
Prep Date:					Analysis Date:	9/20/2016		SeqNo:	1160763	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	LCS				SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	LCSW				Batch ID:	A37386		RunNo:	37386		
Prep Date:					Analysis Date:	9/21/2016		SeqNo:	1162017	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 |
| R RPD outside accepted recovery limits | 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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID LCS	SampType: LCS				TestCode: EPA 200.8: Dissolved Metals					
Client ID: LCSW	Batch ID: A37386				RunNo: 37386					
Prep Date:	Analysis Date: 9/21/2016				SeqNo: 1162017		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	98.7	85	115			

Sample ID LLCS	SampType: LCSLL				TestCode: EPA 200.8: Dissolved Metals					
Client ID: BatchQC	Batch ID: A37386				RunNo: 37386					
Prep Date:	Analysis Date: 9/21/2016				SeqNo: 1162020		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00049	0.00050	0.0005000	0	97.6	50	150			J

Sample ID MB	SampType: MBLK				TestCode: EPA 200.8: Dissolved Metals					
Client ID: PBW	Batch ID: A37386				RunNo: 37386					
Prep Date:	Analysis Date: 9/21/2016				SeqNo: 1162022		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609453-003FMSLL			SampType:	MSLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	MW-2			Batch ID:	27612			RunNo:	37385		
Prep Date:	9/20/2016			Analysis Date:	9/21/2016			SeqNo:	1161920		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.024	0.0010	0.02500	0.001278	92.8	70	130				
Lead	0.012	0.00050	0.01250	0	95.7	70	130				
Selenium	0.022	0.0010	0.02500	0.0005775	84.4	70	130				
Uranium	0.021	0.00050	0.01250	0.008825	94.7	70	130				

Sample ID	1609453-004FMSDL			SampType:	MSDLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	MW-5			Batch ID:	27612			RunNo:	37385		
Prep Date:	9/20/2016			Analysis Date:	9/21/2016			SeqNo:	1161922		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.001210	95.8	70	130	0.644	20		
Lead	0.013	0.00050	0.01250	0	100	70	130	1.04	20		
Selenium	0.023	0.0010	0.02500	0.0003786	89.6	70	130	1.05	20		
Uranium	0.023	0.00050	0.01250	0.009228	110	70	130	1.29	20		

Sample ID	1609453-004FMSLL			SampType:	MSLL			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	MW-5			Batch ID:	27612			RunNo:	37385		
Prep Date:	9/20/2016			Analysis Date:	9/21/2016			SeqNo:	1161923		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.001210	95.1	70	130				
Lead	0.012	0.00050	0.01250	0	99.0	70	130				
Selenium	0.023	0.0010	0.02500	0.0003786	90.6	70	130				
Uranium	0.023	0.00050	0.01250	0.009228	107	70	130				

Sample ID	MB-27612			SampType:	MBLK			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	PBW			Batch ID:	27612			RunNo:	37385		
Prep Date:	9/20/2016			Analysis Date:	9/21/2016			SeqNo:	1161947		
								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	MSLCS-27612			SampType:	LCS			TestCode:	200.8 ICPMS Metals:Total		
Client ID:	LCSW			Batch ID:	27612			RunNo:	37385		
Prep Date:	9/20/2016			Analysis Date:	9/21/2016			SeqNo:	1161950		
								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 |
| R RPD outside accepted recovery limits | 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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MSLCS-27612			SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW			Batch ID:	27612		RunNo:	37385			
Prep Date:	9/20/2016			Analysis Date:	9/21/2016		SeqNo:	1161950		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	92.8	85	115				
Lead	0.012	0.00050	0.01250	0	95.2	85	115				
Selenium	0.024	0.0010	0.02500	0	94.1	85	115				
Uranium	0.012	0.00050	0.01250	0	98.4	85	115				

Sample ID	MSLLCS-27612			SampType:	LCSLL			TestCode: 200.8 ICPMS Metals:Total					
Client ID:	BatchQC			Batch ID:	27612			RunNo: 37385					
Prep Date:	9/20/2016			Analysis Date:	9/21/2016			SeqNo:	1161953		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Arsenic	0.0011	0.0010	0.001000	0	113	50	150						
Lead	0.00049	0.00050	0.0005000	0	98.4	50	150			J			
Selenium	0.00094	0.0010	0.001000	0	94.4	50	150			J			
Uranium	0.00050	0.00050	0.0005000	0	99.7	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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	MB-27494		SampType:	MBLK		TestCode:	EPA Method 245.1: Mercury				
Client ID:	PBW		Batch ID:	27494		RunNo:	37231				
Prep Date:	9/14/2016		Analysis Date:	9/15/2016		SeqNo:	1155489		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	ND	0.00020									

Sample ID	LCS-27494			SampType:	LCS		TestCode:	EPA Method 245.1: Mercury			
Client ID:	LCSW			Batch ID:	27494		RunNo:	37231			
Prep Date:	9/14/2016			Analysis Date:	9/15/2016		SeqNo:	1155490		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0050	0.00020	0.005000	0	99.4	80	120				

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151827		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: R37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151828		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	104	90	110			
Chloride	4.8	0.50	5.000	0	96.3	90	110			
Bromide	2.4	0.10	2.500	0	97.2	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	99.0	90	110			
Sulfate	9.8	0.50	10.00	0	97.8	90	110			

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R37294		RunNo: 37294							
Prep Date:	Analysis Date: 9/17/2016		SeqNo: 1157953		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R37294		RunNo: 37294							
Prep Date:	Analysis Date: 9/17/2016		SeqNo: 1157954		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.7	90	110			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	LCS-27430		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 27430		RunNo: 37116					
Prep Date:	9/12/2016		Analysis Date: 9/12/2016		SeqNo: 1151166		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	121	63.2	155			
Surr: DNOP	0.55		0.5000		111	77.1	144			

Sample ID	MB-27430		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW		Batch ID: 27430		RunNo: 37116					
Prep Date:	9/12/2016		Analysis Date: 9/12/2016		SeqNo: 1151167		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	1.1		1.000		108	77.1	144			

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R37129			RunNo: 37129					
Prep Date:		Analysis Date: 9/12/2016			SeqNo: 1151411		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.2	70	130			
Surr: Toluene-d8	9.7		10.00		96.9	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R37129			RunNo: 37129					
Prep Date:		Analysis Date: 9/12/2016			SeqNo: 1151412		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.1	70	130			
Surr: Dibromofluoromethane	10		10.00		99.9	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: R37339		RunNo: 37339					
Prep Date:			Analysis Date: 9/20/2016		SeqNo: 1159861		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	19	1.0	20.00	0	97.0	70	130			
Chlorobenzene	19	1.0	20.00	0	93.9	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	97.9	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.2	70	130			
Surr: Dibromofluoromethane	10		10.00		99.6	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R37339			RunNo: 37339					
Prep Date:		Analysis Date: 9/20/2016			SeqNo: 1159862		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	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
R	RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R37339	RunNo:	37339					
Prep Date:		Analysis Date:	9/20/2016	SeqNo:	1159862	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R37339			RunNo: 37339						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1159862		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID 1609453-001ams	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: SMW-4	Batch ID: R37339			RunNo: 37339						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1159938		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	19	1.0	20.00	0	96.7	70	130			
Chlorobenzene	19	1.0	20.00	0	95.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.7	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.8	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	10		10.00		101	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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	1609453-001ams	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	SMW-4	Batch ID:	R37339	RunNo:	37339					
Prep Date:		Analysis Date:	9/20/2016	SeqNo:	1159938	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID	1609453-001amsd	SampType: MSD			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	SMW-4	Batch ID: R37339			RunNo: 37339					
Prep Date:		Analysis Date: 9/20/2016			SeqNo: 1159939		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130	0.261	20	
Toluene	19	1.0	20.00	0	93.9	70	130	2.95	20	
Chlorobenzene	19	1.0	20.00	0	96.1	70	130	0.485	20	
1,1-Dichloroethene	18	1.0	20.00	0	91.7	70	130	0.0709	20	
Trichloroethene (TCE)	16	1.0	20.00	0	80.6	70	130	7.39	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		102	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	mb-27434		SampType:	MBLK		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	PBW		Batch ID:	27434		RunNo:	37197			
Prep Date:	9/12/2016		Analysis Date:	9/14/2016		SeqNo:	1154153		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	7.5	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	3.5	10								J
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	3.9	10								J
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	8.5	10								J
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	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
R	RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	mb-27434		SampType:	MBLK		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	PBW		Batch ID:	27434		RunNo:	37197			
Prep Date:	9/12/2016		Analysis Date:	9/14/2016		SeqNo:	1154153	Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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	47		200.0		23.4	15	123			
Surr: Phenol-d5	43		200.0		21.4	4.13	124			
Surr: 2,4,6-Tribromophenol	80		200.0		40.0	18.4	134			
Surr: Nitrobenzene-d5	52		100.0		51.7	28.8	134			
Surr: 2-Fluorobiphenyl	44		100.0		43.5	35.9	125			
Surr: 4-Terphenyl-d14	32		100.0		32.4	15	146			

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
R	RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	Icsd-27434		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 27434		RunNo: 37197					
Prep Date:	9/12/2016		Analysis Date: 9/14/2016		SeqNo: 1154155		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.5	35	113	28.0	0	
4-Chloro-3-methylphenol	110	10	200.0	0	54.2	40.7	114	27.1	0	
2-Chlorophenol	91	10	200.0	0	45.3	37.6	113	43.6	0	
1,4-Dichlorobenzene	42	10	100.0	0	41.6	37.7	106	36.7	0	
2,4-Dinitrotoluene	67	10	100.0	0	66.8	37	91	33.1	0	
N-Nitrosodi-n-propylamine	67	10	100.0	0	67.4	45.4	105	27.9	0	
4-Nitrophenol	90	10	200.0	0	45.2	33.4	104	6.84	0	
Pentachlorophenol	100	20	200.0	0	50.7	29.5	94.9	10.7	0	
Phenol	86	10	200.0	0	43.1	30.6	119	32.2	0	
Pyrene	70	10	100.0	0	70.3	26.2	120	28.0	0	
1,2,4-Trichlorobenzene	45	10	100.0	0	44.8	39.9	125	44.4	0	
Surr: 2-Fluorophenol	95		200.0		47.6	15	123	0	0	
Surr: Phenol-d5	110		200.0		53.5	4.13	124	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		66.9	18.4	134	0	0	
Surr: Nitrobenzene-d5	61		100.0		61.1	28.8	134	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		69.0	35.9	125	0	0	
Surr: 4-Terphenyl-d14	61		100.0		60.5	15	146	0	0	

Sample ID	mb-27514		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 27514		RunNo: 37269					
Prep Date:	9/15/2016		Analysis Date: 9/16/2016		SeqNo: 1157088		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.9	15	123			
Surr: Phenol-d5	100		200.0		52.4	4.13	124			
Surr: 2,4,6-Tribromophenol	220		200.0		108	18.4	134			
Surr: Nitrobenzene-d5	85		100.0		84.6	28.8	134			
Surr: 2-Fluorobiphenyl	88		100.0		88.2	35.9	125			
Surr: 4-Terphenyl-d14	58		100.0		58.3	15	146			

Sample ID	Ics-27434			SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles				
Client ID:	LCSW			Batch ID: 27434		RunNo: 37269				
Prep Date:	9/12/2016			Analysis Date: 9/16/2016		SeqNo: 1157089		Units: µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	88	10	100.0	0	88.1	35	113			
4-Chloro-3-methylphenol	140	10	200.0	0	71.2	40.7	114			
2-Chlorophenol	140	10	200.0	0	70.6	37.6	113			
1,4-Dichlorobenzene	60	10	100.0	0	60.2	37.7	106			
2,4-Dinitrotoluene	93	10	100.0	0	93.2	37	91			S

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

Sample ID	lcs-27434		SampType: LCS			TestCode: EPA Method 8270C: Semivolatiles				
Client ID:	LCSW		Batch ID: 27434			RunNo: 37269				
Prep Date:	9/12/2016		Analysis Date: 9/16/2016			SeqNo: 1157089		Units: µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	89	10	100.0	0	89.3	45.4	105			
4-Nitrophenol	84	10	200.0	0	42.2	33.4	104			
Pentachlorophenol	110	20	200.0	0	56.5	29.5	94.9			
Phenol	120	10	200.0	0	59.7	30.6	119			
Pyrene	93	10	100.0	0	93.3	26.2	120			
1,2,4-Trichlorobenzene	70	10	100.0	0	70.4	39.9	125			
Surr: 2-Fluorophenol	78		200.0		39.0	15	123			
Surr: Phenol-d5	82		200.0		41.1	4.13	124			
Surr: 2,4,6-Tribromophenol	120		200.0		58.5	18.4	134			
Surr: Nitrobenzene-d5	66		100.0		66.3	28.8	134			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	35.9	125			
Surr: 4-Terphenyl-d14	52		100.0		51.6	15	146			

Sample ID	lcs-27514			SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles				
Client ID:	LCSW			Batch ID: 27514		RunNo: 37269				
Prep Date:	9/15/2016			Analysis Date: 9/16/2016		SeqNo: 1157091		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		66.0	15	123			
Surr: Phenol-d5	140		200.0		69.3	4.13	124			
Surr: 2,4,6-Tribromophenol	180		200.0		89.4	18.4	134			
Surr: Nitrobenzene-d5	79		100.0		79.4	28.8	134			
Surr: 2-Fluorobiphenyl	77		100.0		76.8	35.9	125			
Surr: 4-Terphenyl-d14	56		100.0		55.7	15	146			

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
R RPD outside accepted recovery limits	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#: 1609453

21-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 Annual

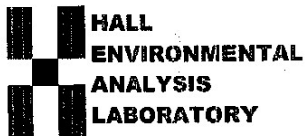
Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	G37129	RunNo:	37129					
Prep Date:		Analysis Date:	9/12/2016	SeqNo:	1151489	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	105	75.4	118			
Surr: BFB	10		10.00		103	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	G37129	RunNo:	37129					
Prep Date:		Analysis Date:	9/12/2016	SeqNo:	1151490	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.10								
Surr: BFB	9.5		10.00		94.9	70	130			

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
R RPD outside accepted recovery limits
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



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: Western Refining Gallup

Work Order Number: 1609453

RcptNo: 1

Received by/date:

AG
09/08/16

Logged By: Ashley Gallegos

9/8/2016 5:10:00 PM

Completed By: Ashley Gallegos

9/9/2016 12:29:12 PM

Reviewed By:

JC 09/09/16

Chain of Custody

1. Custody seals intact on sample bottles?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes ☐

No ☐

Not Present ☒

Yes ☒

No ☐

Not Present ☐

Courier

Log In

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

Yes ☒

No ☐

NA ☐

Yes ☒

No ☐

NA ☐

Yes ☒

No ☐

Yes ☒

No ☐

Yes ☒

No ☐

Yes ☐

No ☒

NA ☐

Yes ☒

No ☐

No VOA Vials ☐

Yes ☐

No ☒

of preserved bottles checked for pH: 155

Adjusted? NO

Checked by: *as*

Special Handling (if applicable)

16. 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:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



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

October 17, 2016

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2016 3rd QTR (MKTF)

OrderNo.: 1609418

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/8/2016 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 #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB090716

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:15:00 AM

Lab ID: 1609418-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
Analyst: JME								
1,2-Dibromoethane	ND	0.0033	0.010		µg/L	1	9/13/2016 3:52:20 PM	27428
EPA METHOD 8015M/D: DIESEL RANGE								
Analyst: TOM								
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 3:58:22 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 3:58:22 PM	27430
Surr: DNOP	107	0	77.1-144		%Rec	1	9/12/2016 3:58:22 PM	27430
EPA METHOD 300.0: ANIONS								
Analyst: LGT								
Fluoride	ND	0.050	0.10		mg/L	1	9/12/2016 2:54:14 PM	R37143
Chloride	ND	0.051	0.50		mg/L	1	9/12/2016 2:54:14 PM	R37143
Bromide	ND	0.044	0.10		mg/L	1	9/12/2016 2:54:14 PM	R37143
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	9/12/2016 2:54:14 PM	R37143
Sulfate	ND	0.14	0.50		mg/L	1	9/12/2016 2:54:14 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/21/2016 11:17:04 AM	R37377
EPA METHOD 200.7: DISSOLVED METALS								
Analyst: ELS								
Barium	ND	0.0013	0.0020		mg/L	1	9/16/2016 1:41:10 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 1:41:10 PM	B37246
Calcium	ND	0.50	1.0		mg/L	1	9/16/2016 1:41:10 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 1:41:10 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 1:41:10 PM	B37246
Iron	ND	0.020	0.020		mg/L	1	9/16/2016 1:41:10 PM	B37246
Magnesium	ND	0.50	1.0		mg/L	1	9/16/2016 1:41:10 PM	B37246
Manganese	0.00044	0.00032	0.0020	J	mg/L	1	9/16/2016 1:41:10 PM	B37246
Potassium	ND	0.50	1.0		mg/L	1	9/16/2016 1:41:10 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 1:41:10 PM	B37246
Sodium	ND	0.50	1.0		mg/L	1	9/16/2016 1:41:10 PM	B37246
Zinc	ND	0.0028	0.010		mg/L	1	9/16/2016 1:41:10 PM	B37246
EPA METHOD 200.7: TOTAL METALS								
Analyst: MED								
Barium	ND	0.00079	0.0020		mg/L	1	9/19/2016 2:42:10 PM	27529
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 7:50:24 PM	27529
Chromium	ND	0.0027	0.0060		mg/L	1	9/19/2016 2:42:10 PM	27529
Copper	ND	0.0030	0.0060		mg/L	1	9/19/2016 2:42:10 PM	27529
Iron	ND	0.020	0.020		mg/L	1	9/29/2016 11:09:28 AM	27675
Manganese	ND	0.00027	0.0020		mg/L	1	9/19/2016 2:42:10 PM	27529
Silver	ND	0.0015	0.0050		mg/L	1	9/19/2016 2:42:10 PM	27529
Zinc	ND	0.0027	0.010		mg/L	1	9/19/2016 2:42:10 PM	27529
EPA 200.8: DISSOLVED METALS								
Analyst: JLF								
Arsenic	ND	0.00014	0.0010		mg/L	1	9/20/2016 2:14:58 PM	B37327
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2016 2:14:58 PM	B37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB090716

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:15:00 AM

Lab ID: 1609418-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Selenium	ND	0.00021	0.0010		mg/L	1	9/20/2016 2:14:58 PM	B37327
Uranium	ND	0.000051	0.00050		mg/L	1	9/20/2016 2:14:58 PM	B37327
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	ND	0.00021	0.0010		mg/L	1	9/19/2016 4:26:09 PM	27529
Lead	ND	0.000081	0.00050		mg/L	1	9/19/2016 4:26:09 PM	27529
Selenium	ND	0.00019	0.0010		mg/L	1	9/19/2016 4:26:09 PM	27529
Uranium	ND	0.00017	0.00050		mg/L	1	9/19/2016 4:26:09 PM	27529
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	ND	0.000053	0.00020		mg/L	1	9/15/2016 12:58:31 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Benzoic acid	10	2.6	20	J	µg/L	1	9/14/2016 7:18:52 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Bis(2-ethylhexyl)phthalate	4.1	2.6	10	J	µg/L	1	9/14/2016 7:18:52 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 7:18:52 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 7:18:52 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Di-n-octyl phthalate	4.5	2.0	10	J	µg/L	1	9/14/2016 7:18:52 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB090716

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:15:00 AM

Lab ID: 1609418-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 7:18:52 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 7:18:52 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 7:18:52 PM	27434
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Dimethyl phthalate	6.8	2.4	10	J	µg/L	1	9/14/2016 7:18:52 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 7:18:52 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 7:18:52 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 7:18:52 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 7:18:52 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 7:18:52 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 7:18:52 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 7:18:52 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 7:18:52 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 7:18:52 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 7:18:52 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 7:18:52 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB090716

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:15:00 AM

Lab ID: 1609418-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 7:18:52 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 7:18:52 PM	27434
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 7:18:52 PM	27434
Surr: 2-Fluorophenol	26.2	0	15-123		%Rec	1	9/14/2016 7:18:52 PM	27434
Surr: Phenol-d5	23.9	0	15-124		%Rec	1	9/14/2016 7:18:52 PM	27434
Surr: 2,4,6-Tribromophenol	36.8	0	18.4-134		%Rec	1	9/14/2016 7:18:52 PM	27434
Surr: Nitrobenzene-d5	56.0	0	28.8-134		%Rec	1	9/14/2016 7:18:52 PM	27434
Surr: 2-Fluorobiphenyl	53.8	0	35.9-125		%Rec	1	9/14/2016 7:18:52 PM	27434
Surr: 4-Terphenyl-d14	37.5	0	15-146		%Rec	1	9/14/2016 7:18:52 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Toluene	ND	0.12	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2,4-Trimethylbenzene	0.21	0.11	1.0	J	µg/L	1	9/12/2016 4:29:25 PM	R37129
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Naphthalene	ND	0.093	2.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Acetone	ND	4.9	10		µg/L	1	9/12/2016 4:29:25 PM	R37129
Bromobenzene	ND	0.098	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Bromoform	ND	0.10	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Bromomethane	ND	0.78	3.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
2-Butanone	ND	0.74	10		µg/L	1	9/12/2016 4:29:25 PM	R37129
Carbon disulfide	ND	0.60	10		µg/L	1	9/12/2016 4:29:25 PM	R37129
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Chloroethane	ND	0.19	2.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Chloroform	ND	0.089	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Chloromethane	ND	0.21	3.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/12/2016 4:29:25 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB090716

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:15:00 AM

Lab ID: 1609418-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Dibromomethane	ND	0.12	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
2-Hexanone	ND	0.84	10		µg/L	1	9/12/2016 4:29:25 PM	R37129
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/12/2016 4:29:25 PM	R37129
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Styrene	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/12/2016 4:29:25 PM	R37129
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/12/2016 4:29:25 PM	R37129
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	9/12/2016 4:29:25 PM	R37129
Surr: 4-Bromofluorobenzene	99.0	0	70-130		%Rec	1	9/12/2016 4:29:25 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB090716

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:15:00 AM

Lab ID: 1609418-001

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	9/12/2016 4:29:25 PM	R37129
Surr: Toluene-d8	100	0	70-130		%Rec	1	9/12/2016 4:29:25 PM	R37129
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.045	0.015	0.050	J	mg/L	1	9/12/2016 4:29:25 PM	G37129
Surr: BFB	101	0	70-130		%Rec	1	9/12/2016 4:29:25 PM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:45:00 AM

Lab ID: 1609418-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
							Analyst: JME	
1,2-Dibromoethane	0.031	0.0033	0.010		µg/L	1	9/13/2016 4:07:34 PM	27428
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	1.2	0.69	1.0		mg/L	1	9/12/2016 5:21:46 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 5:21:46 PM	27430
Surr: DNOP	111	0	77.1-144		%Rec	1	9/12/2016 5:21:46 PM	27430
EPA METHOD 300.0: ANIONS								
							Analyst: LGT	
Fluoride	ND	0.050	0.10		mg/L	1	9/12/2016 4:08:43 PM	R37143
Chloride	630	2.5	25		mg/L	50	9/21/2016 4:56:33 AM	B37361
Bromide	ND	0.044	0.10		mg/L	1	9/12/2016 4:08:43 PM	R37143
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	9/12/2016 4:08:43 PM	R37143
Sulfate	51	2.8	10		mg/L	20	9/12/2016 4:21:08 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/21/2016 11:41:52 AM	R37377
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: ELS	
Barium	0.24	0.0013	0.0020		mg/L	1	9/16/2016 1:45:14 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 1:45:14 PM	B37246
Calcium	110	2.5	5.0		mg/L	5	9/16/2016 1:47:13 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 1:45:14 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 1:45:14 PM	B37246
Iron	0.19	0.020	0.020		mg/L	1	9/16/2016 1:45:14 PM	B37246
Magnesium	19	0.50	1.0		mg/L	1	9/16/2016 1:45:14 PM	B37246
Manganese	1.9	0.0016	0.010	*	mg/L	5	9/16/2016 1:47:13 PM	B37246
Potassium	2.4	0.50	1.0		mg/L	1	9/16/2016 1:45:14 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 1:45:14 PM	B37246
Sodium	550	5.0	10		mg/L	10	9/19/2016 3:55:44 PM	B37295
Zinc	0.0071	0.0028	0.010	J	mg/L	1	9/16/2016 1:45:14 PM	B37246
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.34	0.00079	0.0020		mg/L	1	9/19/2016 2:45:53 PM	27529
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 7:52:25 PM	27529
Chromium	ND	0.0027	0.0060		mg/L	1	9/19/2016 2:45:53 PM	27529
Copper	ND	0.0030	0.0060		mg/L	1	9/19/2016 2:45:53 PM	27529
Iron	3.9	0.10	0.10	*	mg/L	5	9/29/2016 11:11:26 AM	27675
Manganese	2.0	0.0014	0.010	*	mg/L	5	9/19/2016 2:53:24 PM	27529
Silver	ND	0.0015	0.0050		mg/L	1	9/19/2016 2:45:53 PM	27529
Zinc	0.0085	0.0027	0.010	J	mg/L	1	9/19/2016 2:45:53 PM	27529
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.0035	0.00069	0.0050	J	mg/L	5	9/21/2016 7:40:17 PM	A37386
Lead	0.0015	0.00017	0.00050		mg/L	1	9/20/2016 2:18:01 PM	B37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:45:00 AM

Lab ID: 1609418-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Selenium	0.0063	0.00021	0.0010		mg/L	1	9/20/2016 2:18:01 PM	B37327
Uranium	0.020	0.000051	0.00050		mg/L	1	9/20/2016 2:18:01 PM	B37327
200.8 ICPMS METALS:TOTAL								
							Analyst: JLF	
Arsenic	0.0048	0.0021	0.010	J	mg/L	10	9/19/2016 5:01:34 PM	27529
Lead	0.0089	0.000081	0.00050		mg/L	1	9/19/2016 4:29:10 PM	27529
Selenium	0.0075	0.0019	0.010	J	mg/L	10	9/19/2016 5:01:34 PM	27529
Uranium	0.023	0.00017	0.00050		mg/L	1	9/19/2016 4:29:10 PM	27529
EPA METHOD 245.1: MERCURY								
							Analyst: MED	
Mercury	ND	0.000053	0.00020		mg/L	1	9/15/2016 1:04:48 PM	27494
EPA METHOD 8270C: SEMIVOLATILES								
							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Benzoic acid	10	2.6	20	J	µg/L	1	9/14/2016 7:47:19 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Bis(2-ethylhexyl)phthalate	4.0	2.6	10	J	µg/L	1	9/14/2016 7:47:19 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 7:47:19 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 7:47:19 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 7:47:19 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Di-n-octyl phthalate	4.9	2.0	10	J	µg/L	1	9/14/2016 7:47:19 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434

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
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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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:45:00 AM

Lab ID: 1609418-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 7:47:19 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 7:47:19 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 7:47:19 PM	27434
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Dimethyl phthalate	7.3	2.4	10	J	µg/L	1	9/14/2016 7:47:19 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 7:47:19 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 7:47:19 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 7:47:19 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 7:47:19 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 7:47:19 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
1-Methylnaphthalene	4.2	2.9	10	J	µg/L	1	9/14/2016 7:47:19 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 7:47:19 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 7:47:19 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 7:47:19 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 7:47:19 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Naphthalene	2.9	2.6	10	J	µg/L	1	9/14/2016 7:47:19 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 7:47:19 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 7:47:19 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 7:47:19 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 7:47:19 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 7:47:19 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:45:00 AM

Lab ID: 1609418-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 7:47:19 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 7:47:19 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 7:47:19 PM	27434
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 7:47:19 PM	27434
Surr: 2-Fluorophenol	13.8	0	15-123	S	%Rec	1	9/14/2016 7:47:19 PM	27434
Surr: Phenol-d5	11.8	0	15-124	S	%Rec	1	9/14/2016 7:47:19 PM	27434
Surr: 2,4,6-Tribromophenol	31.5	0	18.4-134		%Rec	1	9/14/2016 7:47:19 PM	27434
Surr: Nitrobenzene-d5	41.1	0	28.8-134		%Rec	1	9/14/2016 7:47:19 PM	27434
Surr: 2-Fluorobiphenyl	32.5	0	35.9-125	S	%Rec	1	9/14/2016 7:47:19 PM	27434
Surr: 4-Terphenyl-d14	35.4	0	15-146		%Rec	1	9/14/2016 7:47:19 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	5300	19	200		µg/L	200	9/12/2016 4:58:14 PM	R37129
Toluene	21	2.4	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Ethylbenzene	210	2.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Methyl tert-butyl ether (MTBE)	170	4.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2,4-Trimethylbenzene	9.3	2.2	20	J	µg/L	20	9/12/2016 5:27:02 PM	R37129
1,3,5-Trimethylbenzene	ND	2.3	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2-Dichloroethane (EDC)	ND	2.3	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2-Dibromoethane (EDB)	ND	2.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Naphthalene	ND	1.9	40		µg/L	20	9/12/2016 5:27:02 PM	R37129
1-Methylnaphthalene	9.3	4.1	80	J	µg/L	20	9/12/2016 5:27:02 PM	R37129
2-Methylnaphthalene	ND	3.2	80		µg/L	20	9/12/2016 5:27:02 PM	R37129
Acetone	ND	98	200		µg/L	20	9/12/2016 5:27:02 PM	R37129
Bromobenzene	ND	2.0	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Bromodichloromethane	ND	2.8	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Bromoform	ND	2.0	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Bromomethane	ND	16	60		µg/L	20	9/12/2016 5:27:02 PM	R37129
2-Butanone	ND	15	200		µg/L	20	9/12/2016 5:27:02 PM	R37129
Carbon disulfide	ND	12	200		µg/L	20	9/12/2016 5:27:02 PM	R37129
Carbon Tetrachloride	ND	2.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Chlorobenzene	ND	2.3	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Chloroethane	ND	3.8	40		µg/L	20	9/12/2016 5:27:02 PM	R37129
Chloroform	ND	1.8	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Chloromethane	ND	4.3	60		µg/L	20	9/12/2016 5:27:02 PM	R37129
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
4-Chlorotoluene	ND	2.6	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
cis-1,2-DCE	27	2.5	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
cis-1,3-Dichloropropene	ND	2.1	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2-Dibromo-3-chloropropane	ND	4.7	40		µg/L	20	9/12/2016 5:27:02 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:45:00 AM

Lab ID: 1609418-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Dibromochloromethane	ND	1.7	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Dibromomethane	ND	2.4	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2-Dichlorobenzene	ND	8.0	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,3-Dichlorobenzene	ND	2.9	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,4-Dichlorobenzene	ND	2.9	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Dichlorodifluoromethane	ND	7.1	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,1-Dichloroethane	94	2.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,1-Dichloroethene	42	2.1	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2-Dichloropropane	ND	2.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,3-Dichloropropane	ND	3.1	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
2,2-Dichloropropane	ND	3.3	40		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,1-Dichloropropene	ND	2.7	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Hexachlorobutadiene	ND	4.0	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
2-Hexanone	ND	17	200		µg/L	20	9/12/2016 5:27:02 PM	R37129
Isopropylbenzene	35	2.1	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
4-Isopropyltoluene	ND	2.8	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
4-Methyl-2-pentanone	ND	8.6	200		µg/L	20	9/12/2016 5:27:02 PM	R37129
Methylene Chloride	ND	3.7	60		µg/L	20	9/12/2016 5:27:02 PM	R37129
n-Butylbenzene	15	3.2	60	J	µg/L	20	9/12/2016 5:27:02 PM	R37129
n-Propylbenzene	65	2.6	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
sec-Butylbenzene	11	2.5	20	J	µg/L	20	9/12/2016 5:27:02 PM	R37129
Styrene	ND	2.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
tert-Butylbenzene	ND	2.3	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,1,1,2-Tetrachloroethane	ND	2.2	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,1,2,2-Tetrachloroethane	ND	2.6	40		µg/L	20	9/12/2016 5:27:02 PM	R37129
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
trans-1,2-DCE	ND	8.0	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
trans-1,3-Dichloropropene	ND	2.1	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2,4-Trichlorobenzene	ND	2.7	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,1,1-Trichloroethane	3.5	1.8	20	J	µg/L	20	9/12/2016 5:27:02 PM	R37129
1,1,2-Trichloroethane	ND	2.5	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Trichloroethene (TCE)	ND	3.5	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Trichlorofluoromethane	ND	4.1	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
1,2,3-Trichloropropane	ND	4.0	40		µg/L	20	9/12/2016 5:27:02 PM	R37129
Vinyl chloride	ND	3.9	20		µg/L	20	9/12/2016 5:27:02 PM	R37129
Xylenes, Total	11	7.3	30	J	µg/L	20	9/12/2016 5:27:02 PM	R37129
Surr: 1,2-Dichloroethane-d4	96.3	0	70-130		%Rec	20	9/12/2016 5:27:02 PM	R37129
Surr: 4-Bromofluorobenzene	88.5	0	70-130		%Rec	20	9/12/2016 5:27:02 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 9:45:00 AM

Lab ID: 1609418-002

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: Dibromofluoromethane	90.7	0	70-130		%Rec	20	9/12/2016 5:27:02 PM	R37129
Surr: Toluene-d8	95.9	0	70-130		%Rec	20	9/12/2016 5:27:02 PM	R37129
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	19	0.30	1.0		mg/L	20	9/12/2016 5:27:02 PM	G37129
Surr: BFB	99.9	0	70-130		%Rec	20	9/12/2016 5:27:02 PM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 1:00:00 PM

Lab ID: 1609418-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 5:49:38 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 5:49:38 PM	27430
Surr: DNOP	113	0	77.1-144		%Rec	1	9/12/2016 5:49:38 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.29	0.050	0.10		mg/L	1	9/12/2016 4:33:32 PM	R37143
Chloride	2600	10	100		mg/L	200	9/21/2016 5:08:57 AM	B37361
Bromide	1.4	0.87	2.0	J	mg/L	20	9/12/2016 4:45:56 PM	R37143
Phosphorus, Orthophosphate (As P')	ND	0.076	0.50	H	mg/L	1	9/12/2016 4:33:32 PM	R37143
Sulfate	400	2.8	10		mg/L	20	9/12/2016 4:45:56 PM	R37143
Nitrate+Nitrite as N	ND	0.92	2.0		mg/L	10	9/21/2016 11:54:17 AM	R37377
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS	
Barium	0.067	0.0013	0.0020		mg/L	1	9/16/2016 1:49:12 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 1:49:12 PM	B37246
Calcium	170	2.5	5.0		mg/L	5	9/16/2016 1:51:20 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 1:49:12 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 1:49:12 PM	B37246
Iron	0.083	0.020	0.020		mg/L	1	9/16/2016 1:49:12 PM	B37246
Magnesium	27	0.50	1.0		mg/L	1	9/16/2016 1:49:12 PM	B37246
Manganese	0.29	0.00032	0.0020	*	mg/L	1	9/16/2016 1:49:12 PM	B37246
Potassium	11	0.50	1.0		mg/L	1	9/16/2016 1:49:12 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 1:49:12 PM	B37246
Sodium	1900	25	50		mg/L	50	9/19/2016 3:57:43 PM	B37295
Zinc	0.0034	0.0028	0.010	J	mg/L	1	9/16/2016 1:49:12 PM	B37246
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.12	0.00079	0.0020		mg/L	1	9/19/2016 2:55:26 PM	27529
Cadmium	ND	0.0015	0.0020		mg/L	1	9/21/2016 7:56:08 PM	27529
Chromium	0.0035	0.0027	0.0060	J	mg/L	1	9/19/2016 2:55:26 PM	27529
Copper	ND	0.0030	0.0060		mg/L	1	9/19/2016 2:55:26 PM	27529
Iron	3.7	0.10	0.10	*	mg/L	5	9/29/2016 11:13:22 AM	27675
Manganese	0.58	0.00027	0.0020	*	mg/L	1	9/19/2016 2:55:26 PM	27529
Silver	ND	0.0015	0.0050		mg/L	1	9/19/2016 2:55:26 PM	27529
Zinc	0.017	0.0027	0.010		mg/L	1	9/19/2016 2:55:26 PM	27529
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0030	0.00069	0.0050	J	mg/L	5	9/21/2016 7:43:20 PM	A37386
Lead	0.00063	0.00017	0.00050		mg/L	1	9/20/2016 2:21:05 PM	B37327
Selenium	0.0092	0.0021	0.010	J	mg/L	10	9/21/2016 7:46:23 PM	A37386
Uranium	0.055	0.00026	0.0025	*	mg/L	5	9/21/2016 7:43:20 PM	A37386

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
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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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 1:00:00 PM

Lab ID: 1609418-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0035	0.0011	0.0050	J	mg/L	5	9/19/2016 5:04:35 PM	27529
Lead	0.0051	0.000081	0.00050		mg/L	1	9/19/2016 4:32:10 PM	27529
Selenium	0.010	0.0037	0.020	J	mg/L	20	9/19/2016 5:07:35 PM	27529
Uranium	0.060	0.00087	0.0025	*	mg/L	5	9/19/2016 5:04:35 PM	27529
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000062	0.000053	0.00020	J	mg/L	1	9/15/2016 1:06:55 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Benzoic acid	9.8	2.6	20	J	µg/L	1	9/14/2016 8:15:37 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Bis(2-ethylhexyl)phthalate	3.4	2.6	10	J	µg/L	1	9/14/2016 8:15:37 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 8:15:37 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 8:15:37 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Di-n-octyl phthalate	3.4	2.0	10	J	µg/L	1	9/14/2016 8:15:37 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 8:15:37 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 8:15:37 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 8:15:37 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 1:00:00 PM

Lab ID: 1609418-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Dimethyl phthalate	6.4	2.4	10	J	µg/L	1	9/14/2016 8:15:37 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 8:15:37 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 8:15:37 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 8:15:37 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 8:15:37 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 8:15:37 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 8:15:37 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 8:15:37 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 8:15:37 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 8:15:37 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 8:15:37 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 8:15:37 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 8:15:37 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 8:15:37 PM	27434

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 1:00:00 PM

Lab ID: 1609418-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 8:15:37 PM	27434
Surr: 2-Fluorophenol	16.0	0	15-123		%Rec	1	9/14/2016 8:15:37 PM	27434
Surr: Phenol-d5	13.6	0	15-124	S	%Rec	1	9/14/2016 8:15:37 PM	27434
Surr: 2,4,6-Tribromophenol	31.1	0	18.4-134		%Rec	1	9/14/2016 8:15:37 PM	27434
Surr: Nitrobenzene-d5	46.5	0	28.8-134		%Rec	1	9/14/2016 8:15:37 PM	27434
Surr: 2-Fluorobiphenyl	33.7	0	35.9-125	S	%Rec	1	9/14/2016 8:15:37 PM	27434
Surr: 4-Terphenyl-d14	32.0	0	15-146		%Rec	1	9/14/2016 8:15:37 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	0.31	0.096	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
Toluene	0.21	0.12	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Methyl tert-butyl ether (MTBE)	26	0.21	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2,4-Trimethylbenzene	0.18	0.11	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2-Dichloroethane (EDC)	0.76	0.12	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Naphthalene	ND	0.093	2.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Acetone	ND	4.9	10		µg/L	1	9/12/2016 5:55:54 PM	R37129
Bromobenzene	ND	0.098	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Bromoform	ND	0.10	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Bromomethane	ND	0.78	3.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
2-Butanone	ND	0.74	10		µg/L	1	9/12/2016 5:55:54 PM	R37129
Carbon disulfide	ND	0.60	10		µg/L	1	9/12/2016 5:55:54 PM	R37129
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Chloroethane	ND	0.19	2.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Chloroform	ND	0.089	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Chloromethane	ND	0.21	3.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
cis-1,2-DCE	0.32	0.12	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Dibromomethane	ND	0.12	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

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Lab ID: 1609418-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,1-Dichloroethane	1.7	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,1-Dichloroethene	0.58	0.11	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2-Dichloropropane	0.41	0.11	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
2-Hexanone	ND	0.84	10		µg/L	1	9/12/2016 5:55:54 PM	R37129
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/12/2016 5:55:54 PM	R37129
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
sec-Butylbenzene	0.31	0.12	1.0	J	µg/L	1	9/12/2016 5:55:54 PM	R37129
Styrene	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/12/2016 5:55:54 PM	R37129
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/12/2016 5:55:54 PM	R37129
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	9/12/2016 5:55:54 PM	R37129
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	9/12/2016 5:55:54 PM	R37129
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	9/12/2016 5:55:54 PM	R37129
Surr: Toluene-d8	96.6	0	70-130		%Rec	1	9/12/2016 5:55:54 PM	R37129

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 1:00:00 PM

Lab ID: 1609418-003

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.068	0.015	0.050		mg/L	1	9/12/2016 5:55:54 PM	G37129
Surr: BFB	99.1	0	70-130		%Rec	1	9/12/2016 5:55:54 PM	G37129

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Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 2:35:00 PM

Lab ID: 1609418-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 6:17:12 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 6:17:12 PM	27430
Surr: DNOP	111	0	77.1-144		%Rec	1	9/12/2016 6:17:12 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.85	0.050	0.10		mg/L	1	9/12/2016 4:58:21 PM	R37143
Chloride	81	1.0	10		mg/L	20	9/12/2016 5:10:46 PM	R37143
Bromide	0.34	0.044	0.10		mg/L	1	9/12/2016 4:58:21 PM	R37143
Phosphorus, Orthophosphate (As P')	ND	0.076	0.50	H	mg/L	1	9/12/2016 4:58:21 PM	R37143
Sulfate	590	2.8	10		mg/L	20	9/12/2016 5:10:46 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/21/2016 12:06:42 PM	R37377
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS	
Barium	0.037	0.0013	0.0020		mg/L	1	9/16/2016 1:59:29 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 1:59:29 PM	B37246
Calcium	66	0.50	1.0		mg/L	1	9/16/2016 1:59:29 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 1:59:29 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 1:59:29 PM	B37246
Iron	0.073	0.020	0.020		mg/L	1	9/16/2016 1:59:29 PM	B37246
Magnesium	8.8	0.50	1.0		mg/L	1	9/16/2016 1:59:29 PM	B37246
Manganese	0.62	0.00032	0.0020	*	mg/L	1	9/16/2016 1:59:29 PM	B37246
Potassium	ND	0.50	1.0		mg/L	1	9/16/2016 1:59:29 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 1:59:29 PM	B37246
Sodium	490	2.5	5.0		mg/L	5	9/16/2016 2:01:37 PM	B37246
Zinc	ND	0.0028	0.010		mg/L	1	9/16/2016 1:59:29 PM	B37246
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.13	0.00079	0.0020		mg/L	1	9/19/2016 2:59:23 PM	27529
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 1:52:06 PM	27675
Chromium	ND	0.0027	0.0060		mg/L	1	9/19/2016 2:59:23 PM	27529
Copper	0.0044	0.0030	0.0060	J	mg/L	1	9/19/2016 2:59:23 PM	27529
Iron	2.6	0.10	0.10	*	mg/L	5	9/29/2016 11:15:13 AM	27675
Manganese	0.52	0.00027	0.0020	*	mg/L	1	9/19/2016 2:59:23 PM	27529
Silver	ND	0.0015	0.0050		mg/L	1	9/19/2016 2:59:23 PM	27529
Zinc	0.0084	0.0027	0.010	J	mg/L	1	9/19/2016 2:59:23 PM	27529
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0018	0.00014	0.0010		mg/L	1	9/20/2016 2:24:08 PM	B37327
Lead	0.0021	0.00017	0.00050		mg/L	1	9/20/2016 2:24:08 PM	B37327
Selenium	0.0023	0.00021	0.0010		mg/L	1	9/20/2016 2:24:08 PM	B37327
Uranium	0.012	0.000051	0.00050		mg/L	1	9/20/2016 2:24:08 PM	B37327

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Lab ID: 1609418-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0018	0.00021	0.0010		mg/L	1	9/19/2016 4:35:10 PM	27529
Lead	0.0028	0.000081	0.00050		mg/L	1	9/19/2016 4:35:10 PM	27529
Selenium	0.0022	0.00094	0.0050	J	mg/L	5	9/19/2016 5:10:36 PM	27529
Uranium	0.011	0.00017	0.00050		mg/L	1	9/19/2016 4:35:10 PM	27529
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000066	0.000053	0.00020	J	mg/L	1	9/15/2016 1:09:01 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Benz(a)anthracene	2.9	2.6	10	J	µg/L	1	9/14/2016 8:44:02 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Benzoic acid	11	2.6	20	J	µg/L	1	9/14/2016 8:44:02 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Bis(2-ethylhexyl)phthalate	3.7	2.6	10	J	µg/L	1	9/14/2016 8:44:02 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 8:44:02 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 8:44:02 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Di-n-octyl phthalate	3.7	2.0	10	J	µg/L	1	9/14/2016 8:44:02 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 8:44:02 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 8:44:02 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 8:44:02 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 2:35:00 PM

Lab ID: 1609418-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Dimethyl phthalate	6.5	2.4	10	J	µg/L	1	9/14/2016 8:44:02 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 8:44:02 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 8:44:02 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 8:44:02 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 8:44:02 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 8:44:02 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 8:44:02 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 8:44:02 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 8:44:02 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 8:44:02 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 8:44:02 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 8:44:02 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 8:44:02 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 8:44:02 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 2:35:00 PM

Lab ID: 1609418-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 8:44:02 PM	27434
Surr: 2-Fluorophenol	20.3	0	15-123		%Rec	1	9/14/2016 8:44:02 PM	27434
Surr: Phenol-d5	17.5	0	15-124		%Rec	1	9/14/2016 8:44:02 PM	27434
Surr: 2,4,6-Tribromophenol	33.7	0	18.4-134		%Rec	1	9/14/2016 8:44:02 PM	27434
Surr: Nitrobenzene-d5	50.0	0	28.8-134		%Rec	1	9/14/2016 8:44:02 PM	27434
Surr: 2-Fluorobiphenyl	40.6	0	35.9-125		%Rec	1	9/14/2016 8:44:02 PM	27434
Surr: 4-Terphenyl-d14	32.1	0	15-146		%Rec	1	9/14/2016 8:44:02 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Toluene	ND	0.12	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Methyl tert-butyl ether (MTBE)	2.4	0.21	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Naphthalene	ND	0.093	2.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Acetone	ND	4.9	10		µg/L	1	9/12/2016 6:24:36 PM	R37129
Bromobenzene	ND	0.098	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Bromoform	ND	0.10	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Bromomethane	ND	0.78	3.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
2-Butanone	ND	0.74	10		µg/L	1	9/12/2016 6:24:36 PM	R37129
Carbon disulfide	ND	0.60	10		µg/L	1	9/12/2016 6:24:36 PM	R37129
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Chloroethane	ND	0.19	2.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Chloroform	ND	0.089	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Chloromethane	ND	0.21	3.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Dibromomethane	ND	0.12	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 2:35:00 PM

Lab ID: 1609418-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
2-Hexanone	ND	0.84	10		µg/L	1	9/12/2016 6:24:36 PM	R37129
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/12/2016 6:24:36 PM	R37129
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Styrene	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/12/2016 6:24:36 PM	R37129
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/12/2016 6:24:36 PM	R37129
Surr: 1,2-Dichloroethane-d4	99.6	0	70-130		%Rec	1	9/12/2016 6:24:36 PM	R37129
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	9/12/2016 6:24:36 PM	R37129
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	9/12/2016 6:24:36 PM	R37129
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	9/12/2016 6:24:36 PM	R37129

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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
	R RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 2:35:00 PM

Lab ID: 1609418-004

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.029	0.015	0.050	J	mg/L	1	9/12/2016 6:24:36 PM	G37129
Surr: BFB	98.7	0	70-130		%Rec	1	9/12/2016 6:24:36 PM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609418-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
							Analyst: JME	
1,2-Dibromoethane	0.017	0.0033	0.010		µg/L	1	9/13/2016 4:22:51 PM	27428
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	1.5	0.69	1.0		mg/L	1	9/12/2016 6:44:48 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 6:44:48 PM	27430
Surr: DNOP	109	0	77.1-144		%Rec	1	9/12/2016 6:44:48 PM	27430
EPA METHOD 300.0: ANIONS								
							Analyst: LGT	
Fluoride	2.3	0.050	0.10		mg/L	1	9/12/2016 5:23:10 PM	R37143
Chloride	410	2.5	25		mg/L	50	9/21/2016 5:21:22 AM	B37361
Bromide	ND	0.044	0.10		mg/L	1	9/12/2016 5:23:10 PM	R37143
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	9/12/2016 5:23:10 PM	R37143
Sulfate	48	0.14	0.50		mg/L	1	9/12/2016 5:23:10 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/21/2016 12:19:07 PM	R37377
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: ELS	
Barium	0.16	0.0013	0.0020		mg/L	1	9/16/2016 2:03:34 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 2:03:34 PM	B37246
Calcium	61	0.50	1.0		mg/L	1	9/16/2016 2:03:34 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 2:03:34 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 2:03:34 PM	B37246
Iron	0.045	0.020	0.020		mg/L	1	9/16/2016 2:03:34 PM	B37246
Magnesium	9.9	0.50	1.0		mg/L	1	9/16/2016 2:03:34 PM	B37246
Manganese	0.39	0.00032	0.0020	*	mg/L	1	9/16/2016 2:03:34 PM	B37246
Potassium	2.6	0.50	1.0		mg/L	1	9/16/2016 2:03:34 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 2:03:34 PM	B37246
Sodium	620	5.0	10		mg/L	10	9/19/2016 3:59:34 PM	B37295
Zinc	0.0035	0.0028	0.010	J	mg/L	1	9/16/2016 2:03:34 PM	B37246
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.32	0.00079	0.0020		mg/L	1	9/19/2016 3:03:16 PM	27529
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 1:54:01 PM	27675
Chromium	0.0054	0.0027	0.0060	J	mg/L	1	9/19/2016 3:03:16 PM	27529
Copper	0.0038	0.0030	0.0060	J	mg/L	1	9/19/2016 3:03:16 PM	27529
Iron	5.9	0.20	0.20	*	mg/L	10	9/29/2016 11:17:01 AM	27675
Manganese	0.65	0.00027	0.0020	*	mg/L	1	9/19/2016 3:03:16 PM	27529
Silver	ND	0.0015	0.0050		mg/L	1	9/19/2016 3:03:16 PM	27529
Zinc	0.018	0.0027	0.010		mg/L	1	9/19/2016 3:03:16 PM	27529
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.0029	0.00069	0.0050	J	mg/L	5	9/21/2016 7:49:27 PM	A37386
Lead	0.0015	0.00017	0.00050		mg/L	1	9/20/2016 2:27:11 PM	B37327

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

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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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609418-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Selenium	0.0061	0.0011	0.0050		mg/L	5	9/21/2016 7:49:27 PM	A37386
Uranium	0.035	0.00026	0.0025	*	mg/L	5	9/21/2016 7:49:27 PM	A37386
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0041	0.00021	0.0010		mg/L	1	9/19/2016 4:38:11 PM	27529
Lead	0.0089	0.000081	0.00050		mg/L	1	9/19/2016 4:38:11 PM	27529
Selenium	0.0064	0.00019	0.0010		mg/L	1	9/19/2016 4:38:11 PM	27529
Uranium	0.038	0.00087	0.0025	*	mg/L	5	9/19/2016 5:13:36 PM	27529
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	ND	0.000053	0.00020		mg/L	1	9/15/2016 1:15:21 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Benz(a)anthracene	2.8	2.6	10	J	µg/L	1	9/14/2016 9:12:15 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Benzoic acid	8.3	2.6	20	J	µg/L	1	9/14/2016 9:12:15 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Bis(2-ethylhexyl)phthalate	4.3	2.6	10	J	µg/L	1	9/14/2016 9:12:15 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 9:12:15 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 9:12:15 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 9:12:15 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Di-n-octyl phthalate	3.4	2.0	10	J	µg/L	1	9/14/2016 9:12:15 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609418-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 9:12:15 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 9:12:15 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 9:12:15 PM	27434
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Dimethyl phthalate	5.4	2.4	10	J	µg/L	1	9/14/2016 9:12:15 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 9:12:15 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 9:12:15 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 9:12:15 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 9:12:15 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 9:12:15 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
1-Methylnaphthalene	8.2	2.9	10	J	µg/L	1	9/14/2016 9:12:15 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 9:12:15 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 9:12:15 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 9:12:15 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 9:12:15 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Naphthalene	5.1	2.6	10	J	µg/L	1	9/14/2016 9:12:15 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 9:12:15 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 9:12:15 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 9:12:15 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 9:12:15 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Phenol	6.7	2.0	10	J	µg/L	1	9/14/2016 9:12:15 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 9:12:15 PM	27434

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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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609418-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 9:12:15 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 9:12:15 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 9:12:15 PM	27434
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 9:12:15 PM	27434
Surr: 2-Fluorophenol	21.6	0	15-123		%Rec	1	9/14/2016 9:12:15 PM	27434
Surr: Phenol-d5	19.8	0	15-124		%Rec	1	9/14/2016 9:12:15 PM	27434
Surr: 2,4,6-Tribromophenol	40.6	0	18.4-134		%Rec	1	9/14/2016 9:12:15 PM	27434
Surr: Nitrobenzene-d5	55.4	0	28.8-134		%Rec	1	9/14/2016 9:12:15 PM	27434
Surr: 2-Fluorobiphenyl	44.2	0	35.9-125		%Rec	1	9/14/2016 9:12:15 PM	27434
Surr: 4-Terphenyl-d14	34.4	0	15-146		%Rec	1	9/14/2016 9:12:15 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	1800	9.6	100		µg/L	100	9/13/2016 11:21:01 AM	R37165
Toluene	17	0.12	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Ethylbenzene	160	1.1	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
Methyl tert-butyl ether (MTBE)	110	0.21	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,2,4-Trimethylbenzene	39	1.1	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
1,3,5-Trimethylbenzene	ND	1.2	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
1,2-Dichloroethane (EDC)	3.9	0.12	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Naphthalene	10	0.93	20	J	µg/L	10	9/12/2016 6:53:22 PM	R37129
1-Methylnaphthalene	12	2.0	40	J	µg/L	10	9/12/2016 6:53:22 PM	R37129
2-Methylnaphthalene	ND	1.6	40		µg/L	10	9/12/2016 6:53:22 PM	R37129
Acetone	10	4.9	10		µg/L	1	9/12/2016 7:22:10 PM	R37129
Bromobenzene	ND	0.98	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Bromoform	ND	1.0	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
Bromomethane	ND	0.78	3.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
2-Butanone	3.6	0.74	10	J	µg/L	1	9/12/2016 7:22:10 PM	R37129
Carbon disulfide	ND	0.60	10		µg/L	1	9/12/2016 7:22:10 PM	R37129
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Chloroethane	ND	0.19	2.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Chloroform	ND	0.089	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Chloromethane	ND	0.21	3.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
2-Chlorotoluene	ND	4.0	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
4-Chlorotoluene	ND	1.3	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
cis-1,2-DCE	15	0.12	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,2-Dibromo-3-chloropropane	ND	2.3	20		µg/L	10	9/12/2016 6:53:22 PM	R37129

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

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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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609418-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Dibromomethane	ND	0.12	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,2-Dichlorobenzene	ND	4.0	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
1,3-Dichlorobenzene	ND	1.4	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
1,4-Dichlorobenzene	ND	1.4	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,1-Dichloroethane	48	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,1-Dichloroethene	19	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Hexachlorobutadiene	ND	2.0	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
2-Hexanone	ND	0.84	10		µg/L	1	9/12/2016 7:22:10 PM	R37129
Isopropylbenzene	12	1.0	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
4-Isopropyltoluene	ND	1.4	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
4-Methyl-2-pentanone	0.98	0.43	10	J	µg/L	1	9/12/2016 7:22:10 PM	R37129
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
n-Butylbenzene	ND	1.6	30		µg/L	10	9/12/2016 6:53:22 PM	R37129
n-Propylbenzene	25	1.3	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
sec-Butylbenzene	3.2	1.2	10	J	µg/L	10	9/12/2016 6:53:22 PM	R37129
Styrene	0.59	0.11	1.0	J	µg/L	1	9/12/2016 7:22:10 PM	R37129
tert-Butylbenzene	ND	1.2	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,1,2,2-Tetrachloroethane	ND	1.3	20		µg/L	10	9/12/2016 6:53:22 PM	R37129
Tetrachloroethene (PCE)	0.28	0.15	1.0	J	µg/L	1	9/12/2016 7:22:10 PM	R37129
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,2,3-Trichlorobenzene	ND	1.1	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
1,2,4-Trichlorobenzene	ND	1.3	10		µg/L	10	9/12/2016 6:53:22 PM	R37129
1,1,1-Trichloroethane	0.61	0.091	1.0	J	µg/L	1	9/12/2016 7:22:10 PM	R37129
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Trichloroethene (TCE)	2.5	0.18	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
1,2,3-Trichloropropane	ND	2.0	20		µg/L	10	9/12/2016 6:53:22 PM	R37129
Vinyl chloride	1.1	0.20	1.0		µg/L	1	9/12/2016 7:22:10 PM	R37129
Xylenes, Total	28	0.37	1.5		µg/L	1	9/12/2016 7:22:10 PM	R37129
Surr: 1,2-Dichloroethane-d4	95.2	0	70-130		%Rec	1	9/12/2016 7:22:10 PM	R37129
Surr: 4-Bromofluorobenzene	91.1	0	70-130		%Rec	10	9/12/2016 6:53:22 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 3:45:00 PM

Lab ID: 1609418-005

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: Dibromofluoromethane	95.1	0	70-130		%Rec	1	9/12/2016 7:22:10 PM	R37129
Surr: Toluene-d8	97.1	0	70-130		%Rec	1	9/12/2016 7:22:10 PM	R37129
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	6.2	0.15	0.50		mg/L	10	9/12/2016 6:53:22 PM	G37129
Surr: BFB	102	0	70-130		%Rec	10	9/12/2016 6:53:22 PM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-30

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 4:15:00 PM

Lab ID: 1609418-006

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
							Analyst: JME	
1,2-Dibromoethane	ND	0.0033	0.010		µg/L	1	9/13/2016 4:38:07 PM	27428
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 7:12:31 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 7:12:31 PM	27430
Surr: DNOP	111	0	77.1-144		%Rec	1	9/12/2016 7:12:31 PM	27430
EPA METHOD 300.0: ANIONS								
							Analyst: LGT	
Fluoride	0.79	0.050	0.10		mg/L	1	9/12/2016 6:12:49 PM	R37143
Chloride	970	5.1	50		mg/L	100	9/21/2016 5:33:46 AM	B37361
Bromide	1.0	0.044	0.10		mg/L	1	9/12/2016 6:12:49 PM	R37143
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	9/12/2016 6:12:49 PM	R37143
Sulfate	330	2.8	10		mg/L	20	9/12/2016 6:25:13 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/21/2016 12:31:32 PM	R37377
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: ELS	
Barium	0.046	0.0013	0.0020		mg/L	1	9/16/2016 2:07:28 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 2:07:28 PM	B37246
Calcium	87	0.50	1.0		mg/L	1	9/16/2016 2:07:28 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 2:07:28 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 2:07:28 PM	B37246
Iron	ND	0.020	0.020		mg/L	1	9/16/2016 2:07:28 PM	B37246
Magnesium	17	0.50	1.0		mg/L	1	9/16/2016 2:07:28 PM	B37246
Manganese	0.053	0.00032	0.0020	*	mg/L	1	9/16/2016 2:07:28 PM	B37246
Potassium	0.63	0.50	1.0	J	mg/L	1	9/16/2016 2:07:28 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 2:07:28 PM	B37246
Sodium	930	5.0	10		mg/L	10	9/19/2016 4:10:37 PM	B37295
Zinc	0.0048	0.0028	0.010	J	mg/L	1	9/16/2016 2:07:28 PM	B37246
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.074	0.00079	0.0020		mg/L	1	9/19/2016 3:06:48 PM	27529
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 1:55:50 PM	27675
Chromium	ND	0.0027	0.0060		mg/L	1	9/19/2016 3:06:48 PM	27529
Copper	ND	0.0030	0.0060		mg/L	1	9/19/2016 3:06:48 PM	27529
Iron	1.7	0.10	0.10	*	mg/L	5	9/29/2016 12:45:45 PM	27675
Manganese	0.18	0.00027	0.0020	*	mg/L	1	9/19/2016 3:06:48 PM	27529
Silver	ND	0.0015	0.0050		mg/L	1	9/19/2016 3:06:48 PM	27529
Zinc	0.0063	0.0027	0.010	J	mg/L	1	9/19/2016 3:06:48 PM	27529
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.0026	0.00069	0.0050	J	mg/L	5	9/21/2016 7:52:30 PM	A37386
Lead	0.022	0.00017	0.00050	*	mg/L	1	9/20/2016 2:30:15 PM	B37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-30

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 4:15:00 PM

Lab ID: 1609418-006

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Selenium	0.0076	0.0011	0.0050		mg/L	5	9/21/2016 7:52:30 PM	A37386
Uranium	0.026	0.00026	0.0025		mg/L	5	9/21/2016 7:52:30 PM	A37386
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0024	0.0011	0.0050	J	mg/L	5	9/19/2016 5:16:36 PM	27529
Lead	0.0039	0.000081	0.00050		mg/L	1	9/19/2016 4:41:11 PM	27529
Selenium	0.0081	0.0019	0.010	J	mg/L	10	9/19/2016 5:19:37 PM	27529
Uranium	0.027	0.00087	0.0025		mg/L	5	9/19/2016 5:16:36 PM	27529
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000068	0.000053	0.00020	J	mg/L	1	9/15/2016 1:17:28 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Benzoic acid	7.2	2.6	20	J	µg/L	1	9/14/2016 9:40:31 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Bis(2-ethylhexyl)phthalate	3.4	2.6	10	J	µg/L	1	9/14/2016 9:40:31 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 9:40:31 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 9:40:31 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Di-n-octyl phthalate	3.5	2.0	10	J	µg/L	1	9/14/2016 9:40:31 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-30

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 4:15:00 PM

Lab ID: 1609418-006

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 9:40:31 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 9:40:31 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 9:40:31 PM	27434
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Dimethyl phthalate	5.9	2.4	10	J	µg/L	1	9/14/2016 9:40:31 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 9:40:31 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 9:40:31 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 9:40:31 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 9:40:31 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 9:40:31 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 9:40:31 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 9:40:31 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 9:40:31 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 9:40:31 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 9:40:31 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 9:40:31 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-30

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 4:15:00 PM

Lab ID: 1609418-006

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 9:40:31 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 9:40:31 PM	27434
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 9:40:31 PM	27434
Surr: 2-Fluorophenol	14.6	0	15-123	S	%Rec	1	9/14/2016 9:40:31 PM	27434
Surr: Phenol-d5	13.0	0	15-124	S	%Rec	1	9/14/2016 9:40:31 PM	27434
Surr: 2,4,6-Tribromophenol	29.4	0	18.4-134		%Rec	1	9/14/2016 9:40:31 PM	27434
Surr: Nitrobenzene-d5	37.4	0	28.8-134		%Rec	1	9/14/2016 9:40:31 PM	27434
Surr: 2-Fluorobiphenyl	34.7	0	35.9-125	S	%Rec	1	9/14/2016 9:40:31 PM	27434
Surr: 4-Terphenyl-d14	22.4	0	15-146		%Rec	1	9/14/2016 9:40:31 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	0.60	0.096	1.0	J	µg/L	1	9/12/2016 8:19:40 PM	R37129
Toluene	ND	0.12	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Ethylbenzene	0.19	0.11	1.0	J	µg/L	1	9/12/2016 8:19:40 PM	R37129
Methyl tert-butyl ether (MTBE)	0.84	0.21	1.0	J	µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2-Dichloroethane (EDC)	5.7	0.12	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Naphthalene	ND	0.093	2.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Acetone	ND	4.9	10		µg/L	1	9/12/2016 8:19:40 PM	R37129
Bromobenzene	ND	0.098	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Bromoform	ND	0.10	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Bromomethane	ND	0.78	3.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
2-Butanone	ND	0.74	10		µg/L	1	9/12/2016 8:19:40 PM	R37129
Carbon disulfide	ND	0.60	10		µg/L	1	9/12/2016 8:19:40 PM	R37129
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Chloroethane	ND	0.19	2.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Chloroform	ND	0.089	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Chloromethane	ND	0.21	3.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
cis-1,2-DCE	12	0.12	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/12/2016 8:19:40 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-30

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 4:15:00 PM

Lab ID: 1609418-006

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Dibromomethane	ND	0.12	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,1-Dichloroethane	110	1.1	10		µg/L	10	9/12/2016 7:50:52 PM	R37129
1,1-Dichloroethene	12	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
2-Hexanone	ND	0.84	10		µg/L	1	9/12/2016 8:19:40 PM	R37129
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/12/2016 8:19:40 PM	R37129
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Styrene	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Tetrachloroethene (PCE)	0.66	0.15	1.0	J	µg/L	1	9/12/2016 8:19:40 PM	R37129
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,1,1-Trichloroethane	2.7	0.091	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,1,2-Trichloroethane	0.96	0.13	1.0	J	µg/L	1	9/12/2016 8:19:40 PM	R37129
Trichloroethene (TCE)	7.9	0.18	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Vinyl chloride	1.8	0.20	1.0		µg/L	1	9/12/2016 8:19:40 PM	R37129
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/12/2016 8:19:40 PM	R37129
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	9/12/2016 8:19:40 PM	R37129
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	9/12/2016 8:19:40 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-30

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016 4:15:00 PM

Lab ID: 1609418-006

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: Dibromofluoromethane	98.7	0	70-130		%Rec	1	9/12/2016 8:19:40 PM	R37129
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	9/12/2016 8:19:40 PM	R37129
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.23	0.015	0.050		mg/L	1	9/12/2016 8:19:40 PM	G37129
Surr: BFB	98.2	0	70-130		%Rec	1	9/12/2016 8:19:40 PM	G37129

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
	R	RPD outside accepted recovery limits	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, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016

Lab ID: 1609418-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	9/12/2016 7:40:23 PM	27430
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2016 7:40:23 PM	27430
Surr: DNOP	111	0	77.1-144		%Rec	1	9/12/2016 7:40:23 PM	27430
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	0.85	0.050	0.10		mg/L	1	9/12/2016 6:37:38 PM	R37143
Chloride	81	1.0	10		mg/L	20	9/12/2016 6:50:03 PM	R37143
Bromide	0.34	0.044	0.10		mg/L	1	9/12/2016 6:37:38 PM	R37143
Phosphorus, Orthophosphate (As P')	ND	0.076	0.50	H	mg/L	1	9/12/2016 6:37:38 PM	R37143
Sulfate	590	2.8	10		mg/L	20	9/12/2016 6:50:03 PM	R37143
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	9/21/2016 1:21:09 PM	R37377
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS	
Barium	0.037	0.0013	0.0020		mg/L	1	9/16/2016 2:11:29 PM	B37246
Cadmium	ND	0.00075	0.0020		mg/L	1	9/16/2016 2:11:29 PM	B37246
Calcium	67	0.50	1.0		mg/L	1	9/16/2016 2:11:29 PM	B37246
Chromium	ND	0.0018	0.0060		mg/L	1	9/16/2016 2:11:29 PM	B37246
Copper	ND	0.0040	0.0060		mg/L	1	9/16/2016 2:11:29 PM	B37246
Iron	0.072	0.020	0.020		mg/L	1	9/16/2016 2:11:29 PM	B37246
Magnesium	8.8	0.50	1.0		mg/L	1	9/16/2016 2:11:29 PM	B37246
Manganese	0.61	0.00032	0.0020	*	mg/L	1	9/16/2016 2:11:29 PM	B37246
Potassium	ND	0.50	1.0		mg/L	1	9/16/2016 2:11:29 PM	B37246
Silver	ND	0.0028	0.0050		mg/L	1	9/16/2016 2:11:29 PM	B37246
Sodium	500	2.5	5.0		mg/L	5	9/16/2016 2:13:36 PM	B37246
Zinc	ND	0.0028	0.010		mg/L	1	9/16/2016 2:11:29 PM	B37246
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.14	0.00079	0.0020		mg/L	1	9/19/2016 3:10:39 PM	27529
Cadmium	ND	0.0015	0.0020		mg/L	1	10/3/2016 1:57:33 PM	27675
Chromium	0.0033	0.0027	0.0060	J	mg/L	1	9/19/2016 3:10:39 PM	27529
Copper	0.0054	0.0030	0.0060	J	mg/L	1	9/19/2016 3:10:39 PM	27529
Iron	2.8	0.10	0.10	*	mg/L	5	9/29/2016 12:47:39 PM	27675
Manganese	0.62	0.00027	0.0020	*	mg/L	1	9/19/2016 3:10:39 PM	27529
Silver	ND	0.0015	0.0050		mg/L	1	9/19/2016 3:10:39 PM	27529
Zinc	0.0073	0.0027	0.010	J	mg/L	1	9/19/2016 3:10:39 PM	27529
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0018	0.00014	0.0010		mg/L	1	9/20/2016 2:33:18 PM	B37327
Lead	0.0019	0.00017	0.00050		mg/L	1	9/20/2016 2:33:18 PM	B37327
Selenium	0.0026	0.00021	0.0010		mg/L	1	9/20/2016 2:33:18 PM	B37327
Uranium	0.013	0.000051	0.00050		mg/L	1	9/20/2016 2:33:18 PM	B37327

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016

Lab ID: 1609418-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0022	0.00021	0.0010		mg/L	1	9/19/2016 4:50:16 PM	27529
Lead	0.0032	0.000081	0.00050		mg/L	1	9/19/2016 4:50:16 PM	27529
Selenium	0.0031	0.00094	0.0050	J	mg/L	5	9/19/2016 5:22:37 PM	27529
Uranium	0.012	0.00017	0.00050		mg/L	1	9/19/2016 4:50:16 PM	27529
EPA METHOD 245.1: MERCURY							Analyst: MED	
Mercury	0.000064	0.000053	0.00020	J	mg/L	1	9/15/2016 1:19:27 PM	27494
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Acenaphthylene	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Aniline	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Anthracene	ND	2.5	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Azobenzene	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Benz(a)anthracene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Benzo(a)pyrene	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Benzoic acid	8.7	2.6	20	J	µg/L	1	9/14/2016 10:08:51 PM	27434
Benzyl alcohol	ND	3.0	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Bis(2-ethylhexyl)phthalate	3.6	2.6	10	J	µg/L	1	9/14/2016 10:08:51 PM	27434
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Carbazole	ND	2.3	10		µg/L	1	9/14/2016 10:08:51 PM	27434
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
4-Chloroaniline	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2-Chloronaphthalene	ND	2.3	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2-Chlorophenol	ND	2.2	10		µg/L	1	9/14/2016 10:08:51 PM	27434
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Chrysene	ND	2.8	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Di-n-octyl phthalate	3.7	2.0	10	J	µg/L	1	9/14/2016 10:08:51 PM	27434
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Dibenzofuran	ND	2.5	10		µg/L	1	9/14/2016 10:08:51 PM	27434
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 10:08:51 PM	27434
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	9/14/2016 10:08:51 PM	27434

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
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 3rd QTR (MKTf)

Collection Date: 9/7/2016

Lab ID: 1609418-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Diethyl phthalate	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Dimethyl phthalate	5.5	2.4	10	J	µg/L	1	9/14/2016 10:08:51 PM	27434
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	9/14/2016 10:08:51 PM	27434
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	9/14/2016 10:08:51 PM	27434
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	9/14/2016 10:08:51 PM	27434
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	9/14/2016 10:08:51 PM	27434
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Fluoranthene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Fluorene	ND	2.7	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Hexachlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Hexachlorobutadiene	ND	2.2	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Hexachloroethane	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Isophorone	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
1-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2-Methylnaphthalene	ND	2.9	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2-Methylphenol	ND	2.5	10		µg/L	1	9/14/2016 10:08:51 PM	27434
3+4-Methylphenol	ND	2.3	10		µg/L	1	9/14/2016 10:08:51 PM	27434
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	9/14/2016 10:08:51 PM	27434
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Naphthalene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2-Nitroaniline	ND	2.8	10		µg/L	1	9/14/2016 10:08:51 PM	27434
3-Nitroaniline	ND	2.9	10		µg/L	1	9/14/2016 10:08:51 PM	27434
4-Nitroaniline	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Nitrobenzene	ND	2.8	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2-Nitrophenol	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
4-Nitrophenol	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Pentachlorophenol	ND	2.3	20		µg/L	1	9/14/2016 10:08:51 PM	27434
Phenanthrene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Phenol	ND	2.0	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Pyrene	ND	3.1	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Pyridine	ND	2.2	10		µg/L	1	9/14/2016 10:08:51 PM	27434
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	9/14/2016 10:08:51 PM	27434
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	9/14/2016 10:08:51 PM	27434

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016

Lab ID: 1609418-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	9/14/2016 10:08:51 PM	27434
Surr: 2-Fluorophenol	15.8	0	15-123		%Rec	1	9/14/2016 10:08:51 PM	27434
Surr: Phenol-d5	14.6	0	15-124	S	%Rec	1	9/14/2016 10:08:51 PM	27434
Surr: 2,4,6-Tribromophenol	32.3	0	18.4-134		%Rec	1	9/14/2016 10:08:51 PM	27434
Surr: Nitrobenzene-d5	44.2	0	28.8-134		%Rec	1	9/14/2016 10:08:51 PM	27434
Surr: 2-Fluorobiphenyl	36.4	0	35.9-125		%Rec	1	9/14/2016 10:08:51 PM	27434
Surr: 4-Terphenyl-d14	31.5	0	15-146		%Rec	1	9/14/2016 10:08:51 PM	27434
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	0.30	0.096	1.0	J	µg/L	1	9/12/2016 8:48:27 PM	R37129
Toluene	ND	0.12	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Ethylbenzene	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Methyl tert-butyl ether (MTBE)	3.8	0.21	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Naphthalene	ND	0.093	2.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Acetone	ND	4.9	10		µg/L	1	9/12/2016 8:48:27 PM	R37129
Bromobenzene	ND	0.098	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Bromodichloromethane	ND	0.14	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Bromoform	ND	0.10	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Bromomethane	ND	0.78	3.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
2-Butanone	ND	0.74	10		µg/L	1	9/12/2016 8:48:27 PM	R37129
Carbon disulfide	ND	0.60	10		µg/L	1	9/12/2016 8:48:27 PM	R37129
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Chlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Chloroethane	ND	0.19	2.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Chloroform	ND	0.089	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Chloromethane	ND	0.21	3.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Dibromochloromethane	ND	0.087	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Dibromomethane	ND	0.12	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016

Lab ID: 1609418-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
2-Hexanone	ND	0.84	10		µg/L	1	9/12/2016 8:48:27 PM	R37129
Isopropylbenzene	ND	0.10	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	9/12/2016 8:48:27 PM	R37129
Methylene Chloride	ND	0.19	3.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
n-Butylbenzene	ND	0.16	3.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
n-Propylbenzene	ND	0.13	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Styrene	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Vinyl chloride	ND	0.20	1.0		µg/L	1	9/12/2016 8:48:27 PM	R37129
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/12/2016 8:48:27 PM	R37129
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	9/12/2016 8:48:27 PM	R37129
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	9/12/2016 8:48:27 PM	R37129
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/12/2016 8:48:27 PM	R37129
Surr: Toluene-d8	98.1	0	70-130		%Rec	1	9/12/2016 8:48:27 PM	R37129

EPA METHOD 8015D: GASOLINE RANGE

Analyst: **AG**

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
	R	RPD outside accepted recovery limits	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, Inc.

Analytical Report

Lab Order 1609418

Date Reported: 10/17/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 3rd QTR (MKTF)

Collection Date: 9/7/2016

Lab ID: 1609418-007

Matrix: AQUEOUS

Received Date: 9/8/2016 5:10:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: AG	
Gasoline Range Organics (GRO)	0.034	0.015	0.050	J	mg/L	1	9/12/2016 8:48:27 PM	G37129
Surr: BFB	99.9	0	70-130		%Rec	1	9/12/2016 8:48:27 PM	G37129

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
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	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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID MB-B	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: B37246		RunNo: 37246							
Prep Date:	Analysis Date: 9/16/2016		SeqNo: 1155991		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								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID LCS-B	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: B37246		RunNo: 37246							
Prep Date:	Analysis Date: 9/16/2016		SeqNo: 1155992		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	98.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	49	1.0	50.00	0	98.3	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.0	85	115			
Iron	0.48	0.020	0.5000	0	96.6	85	115			
Magnesium	49	1.0	50.00	0	97.9	85	115			
Manganese	0.48	0.0020	0.5000	0	96.0	85	115			
Potassium	48	1.0	50.00	0	95.7	85	115			
Silver	0.10	0.0050	0.1000	0	99.9	85	115			
Sodium	48	1.0	50.00	0	96.0	85	115			
Zinc	0.50	0.010	0.5000	0	99.0	85	115			

Sample ID LLCS-B	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: B37246		RunNo: 37246							
Prep Date:	Analysis Date: 9/16/2016		SeqNo: 1155993		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Cadmium	0.0017	0.0020	0.002000	0	87.0	50	150			J
Calcium	0.56	1.0	0.5000	0	111	50	150			J
Chromium	0.0056	0.0060	0.006000	0	94.0	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
R RPD outside accepted recovery limits	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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID LLLCS-B	SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: BatchQC	Batch ID: B37246			RunNo: 37246						
Prep Date:	Analysis Date: 9/16/2016			SeqNo: 1155993			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0043	0.0060	0.006000	0	71.8	50	150			J
Iron	0.023	0.020	0.02000	0	116	50	150			
Magnesium	0.53	1.0	0.5000	0	107	50	150			J
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Potassium	0.59	1.0	0.5000	0	119	50	150			J
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Sodium	0.48	1.0	0.5000	0	95.6	50	150			J
Zinc	0.0067	0.010	0.005000	0	135	50	150			J

Sample ID MB-B	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: PBW	Batch ID: B37295			RunNo: 37295						
Prep Date:	Analysis Date: 9/19/2016			SeqNo: 1158025			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: B37295			RunNo: 37295						
Prep Date:	Analysis Date: 9/19/2016			SeqNo: 1158026			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Sample ID LLLCS-B	SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: BatchQC	Batch ID: B37295			RunNo: 37295						
Prep Date:	Analysis Date: 9/19/2016			SeqNo: 1158027			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.55	1.0	0.5000	0	111	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
R RPD outside accepted recovery limits	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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID MB-27529	SampType: MBLK		TestCode: EPA Method 200.7: Total Metals							
Client ID: PBW	Batch ID: 27529		RunNo: 37295							
Prep Date: 9/15/2016	Analysis Date: 9/19/2016		SeqNo: 1159046		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Chromium	ND	0.0060								
Manganese	0.00078	0.0020								J
Silver	ND	0.0050								
Zinc	0.0028	0.010								J

Sample ID LCS-27529	SampType: LCS		TestCode: EPA Method 200.7: Total Metals							
Client ID: LCSW	Batch ID: 27529		RunNo: 37295							
Prep Date: 9/15/2016	Analysis Date: 9/19/2016		SeqNo: 1159047		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Manganese	0.50	0.0020	0.5000	0	99.3	85	115			
Silver	0.10	0.0050	0.1000	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID LLCS-27529	SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals							
Client ID: BatchQC	Batch ID: 27529		RunNo: 37295							
Prep Date: 9/15/2016	Analysis Date: 9/19/2016		SeqNo: 1159048		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	106	50	150			
Chromium	0.0067	0.0060	0.006000	0	111	50	150			
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Zinc	0.0056	0.010	0.005000	0	112	50	150			J

Sample ID MB-27529	SampType: MBLK		TestCode: EPA Method 200.7: Total Metals							
Client ID: PBW	Batch ID: 27529		RunNo: 37295							
Prep Date: 9/15/2016	Analysis Date: 9/19/2016		SeqNo: 1159049		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0056	0.0060								J

Sample ID LCS-27529	SampType: LCS		TestCode: EPA Method 200.7: Total Metals							
Client ID: LCSW	Batch ID: 27529		RunNo: 37295							
Prep Date: 9/15/2016	Analysis Date: 9/19/2016		SeqNo: 1159050		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 |
| R RPD outside accepted recovery limits | 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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID	LCS-27529			SampType:	LCS			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	LCSW			Batch ID:	27529			RunNo:	37295		
Prep Date:	9/15/2016			Analysis Date:	9/19/2016			SeqNo:	1159050		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	0.50	0.0060	0.5000	0	99.9	85	115				

Sample ID	LLCS-27529			SampType:	LCSLL			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	BatchQC			Batch ID:	27529			RunNo:	37295		
Prep Date:	9/15/2016			Analysis Date:	9/19/2016			SeqNo:	1159051		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	0.0051	0.0060	0.006000	0	84.5	50	150			J	

Sample ID	MB-27529			SampType:	MBLK			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	PBW			Batch ID:	27529			RunNo:	37369		
Prep Date:	9/15/2016			Analysis Date:	9/21/2016			SeqNo:	1161343		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cadmium	ND	0.0020									

Sample ID	LCS-27529			SampType:	LCS			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	LCSW			Batch ID:	27529			RunNo:	37369		
Prep Date:	9/15/2016			Analysis Date:	9/21/2016			SeqNo:	1161344		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cadmium	0.50	0.0020	0.5000	0	99.8	85	115				

Sample ID	LLCS-27529			SampType:	LCSLL			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	BatchQC			Batch ID:	27529			RunNo:	37369		
Prep Date:	9/15/2016			Analysis Date:	9/21/2016			SeqNo:	1161345		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cadmium	0.0022	0.0020	0.002000	0	110	50	150				

Sample ID	MB-27675			SampType:	MBLK			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	PBW			Batch ID:	27675			RunNo:	37552		
Prep Date:	9/23/2016			Analysis Date:	9/29/2016			SeqNo:	1168528		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cadmium	ND	0.0020									
Iron	ND	0.020									

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 |
| R RPD outside accepted recovery limits | 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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID	LCS-27675			SampType: LCS		TestCode: EPA Method 200.7: Total Metals				
Client ID:	LCSW			Batch ID: 27675		RunNo: 37552				
Prep Date:	9/23/2016			Analysis Date: 9/29/2016		SeqNo: 1168529		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Iron	0.48	0.020	0.5000	0	95.6	85	115			

Sample ID	LLLCS-27675			SampType:	LCSLL			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	BatchQC			Batch ID:	27675			RunNo:	37552		
Prep Date:	9/23/2016			Analysis Date:	9/29/2016			SeqNo:	1168530		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cadmium	0.0024	0.0020	0.002000	0	120	50	150				

Sample ID	LLCS-27675	SampType: LCSLL			TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID: 27675			RunNo: 37552					
Prep Date:	9/23/2016	Analysis Date: 9/29/2016			SeqNo: 1168534		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.019	0.020	0.02000	0	92.7	50	150			J

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: LCSW	Batch ID: B37327			RunNo: 37327						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1160758			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	94.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.8	85	115			
Selenium	0.024	0.0010	0.02500	0	95.3	85	115			
Uranium	0.012	0.00050	0.01250	0	98.7	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: B37327			RunNo: 37327						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1160760			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	100	50	150			
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00098	0.0010	0.001000	0	98.0	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.9	50	150			J

Sample ID MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID: PBW	Batch ID: B37327			RunNo: 37327						
Prep Date:	Analysis Date: 9/20/2016			SeqNo: 1160762			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 LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: LCSW	Batch ID: A37386			RunNo: 37386						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1162017			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	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	97.7	85	115			
Uranium	0.012	0.00050	0.01250	0	98.7	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: A37386			RunNo: 37386						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1162020			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	98.4	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 |
| R RPD outside accepted recovery limits | 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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID	LLLCS	SampType:	LCSLL	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	A37386	RunNo:	37386					
Prep Date:		Analysis Date:	9/21/2016	SeqNo:	1162020	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0010	0.0010	0.001000	0	102	50	150			
Uranium	0.00049	0.00050	0.0005000	0	97.6	50	150			J

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	A37386	RunNo:	37386					
Prep Date:		Analysis Date:	9/21/2016	SeqNo:	1162022	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID	MB-27529		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	27529		RunNo:	37309			
Prep Date:	9/15/2016		Analysis Date:	9/19/2016		SeqNo:	1158682	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	0.00010	0.00050								J
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	MSLCS-27529		SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW		Batch ID:	27529		RunNo:	37309			
Prep Date:	9/15/2016		Analysis Date:	9/19/2016		SeqNo:	1158684	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	99.2	85	115			
Lead	0.012	0.00050	0.01250	0	99.4	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.012	0.00050	0.01250	0	96.1	85	115			

Sample ID	MSLLLCS-27529		SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	BatchQC		Batch ID:	27529		RunNo:	37309			
Prep Date:	9/15/2016		Analysis Date:	9/19/2016		SeqNo:	1158686	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	108	50	150			
Lead	0.00051	0.00050	0.0005000	0	103	50	150			
Selenium	0.00089	0.0010	0.001000	0	89.1	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.3	50	150			J

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
R RPD outside accepted recovery limits
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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID	MB-27494		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 27494		RunNo: 37231					
Prep Date:	9/14/2016		Analysis Date: 9/15/2016		SeqNo: 1155489		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	ND	0.00020								

Sample ID	LCS-27494		SampType: LCS		TestCode: EPA Method 245.1: Mercury					
Client ID:	LCSW		Batch ID: 27494		RunNo: 37231					
Prep Date:	9/14/2016		Analysis Date: 9/15/2016		SeqNo: 1155490		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.4	80	120			

Sample ID	1609418-001FMS			SampType:	MS		TestCode:	EPA Method 245.1: Mercury			
Client ID:	FB090716			Batch ID:	27494		RunNo:	37231			
Prep Date:	9/14/2016			Analysis Date:	9/15/2016		SeqNo:	1155492		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0050	0.00020	0.005000	0	100	75	125				

Sample ID	1609418-001FMSD			SampType:	MSD		TestCode:	EPA Method 245.1: Mercury			
Client ID:	FB090716			Batch ID:	27494		RunNo:	37231			
Prep Date:	9/14/2016			Analysis Date:	9/15/2016		SeqNo:	1155493		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0050	0.00020	0.005000	0	100	75	125	0.0598	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
R RPD outside accepted recovery limits	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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151827		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: R37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151828		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	104	90	110			
Chloride	4.8	0.50	5.000	0	96.3	90	110			
Bromide	2.4	0.10	2.500	0	97.2	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	99.0	90	110			
Sulfate	9.8	0.50	10.00	0	97.8	90	110			

Sample ID 1609418-001DMS	SampType: MS		TestCode: EPA Method 300.0: Anions							
Client ID: FB090716	Batch ID: R37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151852		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	104	74.5	121			
Chloride	4.7	0.50	5.000	0	94.8	81.9	117			
Bromide	2.4	0.10	2.500	0	95.9	74.6	115			
Sulfate	9.6	0.50	10.00	0	95.8	83	118			

Sample ID 1609418-001DMSD	SampType: MSD		TestCode: EPA Method 300.0: Anions							
Client ID: FB090716	Batch ID: R37143		RunNo: 37143							
Prep Date:	Analysis Date: 9/12/2016		SeqNo: 1151853		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	105	74.5	121	0.403	20	
Chloride	4.8	0.50	5.000	0	95.1	81.9	117	0.280	20	
Bromide	2.4	0.10	2.500	0	95.9	74.6	115	0.0459	20	
Sulfate	9.6	0.50	10.00	0	96.0	83	118	0.262	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
R RPD outside accepted recovery limits	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#: 1609418

17-Oct-16

Client: Western Refining Southwest, Gallup

Project: 2016 3rd QTR (MKTF)

Sample ID MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: B37361			RunNo: 37361						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1160852		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: B37361			RunNo: 37361						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1160853		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.7	90	110			

Sample ID MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R37377			RunNo: 37377						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1161713		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCSb	SampType: LCS			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: R37377			RunNo: 37377						
Prep Date:	Analysis Date: 9/21/2016			SeqNo: 1161716		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified