

AP - 111

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

2016

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611792

Date Reported: 1/19/2017

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: STP1-NW

Project: 2016 4th QTR Ground Water

Collection Date: 11/14/2016 3:00:00 PM

Lab ID: 1611792-008

Matrix: AQUEOUS

Received Date: 11/15/2016 5:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 1,2-Dichloroethane-d4	95.3	0	70-130		%Rec	1	11/17/2016 11:49:11 PM	R38783
Surr: 4-Bromofluorobenzene	94.1	0	70-130		%Rec	1	11/17/2016 11:49:11 PM	R38783
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	11/17/2016 11:49:11 PM	R38783
Surr: Toluene-d8	98.3	0	70-130		%Rec	1	11/17/2016 11:49:11 PM	R38783

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 1611792

Date Reported: 1/19/2017

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP-01

Project: 2016 4th QTR Ground Water

Collection Date: 11/14/2016 11:45:00 AM

Lab ID: 1611792-009

Matrix: AQUEOUS

Received Date: 11/15/2016 5:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: JME	
Diesel Range Organics (DRO)	8.5	0.69	1.0		mg/L	1	11/18/2016 2:19:09 AM	28698
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/18/2016 2:19:09 AM	28698
Surr: DNOP	109	0	77.1-144		%Rec	1	11/18/2016 2:19:09 AM	28698
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	1.4	0.13	0.25		mg/L	5	11/16/2016 6:59:43 PM	G38747
Surr: BFB	120	0	66.4-120	S	%Rec	5	11/16/2016 6:59:43 PM	G38747
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	1.6	0.25	0.50		mg/L	5	11/30/2016 10:22:39 PM	R39076
Chloride	1600	10	100		mg/L	200	11/30/2016 10:35:03 PM	R39076
Bromide	11	0.22	0.50		mg/L	5	11/16/2016 4:26:40 PM	R38771
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5	H	mg/L	5	11/16/2016 4:26:40 PM	R38771
Sulfate	12	0.71	2.5		mg/L	5	11/16/2016 4:26:40 PM	R38771
Nitrate+Nitrite as N	ND	0.92	2.0		mg/L	10	12/5/2016 10:31:55 PM	R39175
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.87	0.0013	0.0020		mg/L	1	12/9/2016 1:46:41 PM	A39280
Cadmium	ND	0.00075	0.0020		mg/L	1	12/9/2016 1:46:41 PM	A39280
Calcium	170	2.5	5.0		mg/L	5	12/12/2016 1:34:44 PM	A39337
Chromium	ND	0.0018	0.0060		mg/L	1	12/9/2016 1:46:41 PM	A39280
Copper	ND	0.0040	0.0060		mg/L	1	12/9/2016 1:46:41 PM	A39280
Iron	7.1	0.20	0.20	*	mg/L	10	12/12/2016 1:36:24 PM	A39337
Magnesium	33	0.50	1.0		mg/L	1	12/9/2016 1:46:41 PM	A39280
Manganese	1.8	0.0016	0.010	*	mg/L	5	12/12/2016 1:34:44 PM	A39337
Potassium	4.2	0.50	1.0		mg/L	1	12/9/2016 1:46:41 PM	A39280
Silver	ND	0.0028	0.0050		mg/L	1	12/9/2016 1:46:41 PM	A39280
Sodium	1300	25	50		mg/L	50	12/12/2016 1:38:24 PM	A39337
Zinc	0.011	0.0028	0.010		mg/L	1	12/9/2016 1:46:41 PM	A39280
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.93	0.00079	0.0020		mg/L	1	12/8/2016 3:35:29 PM	29034
Cadmium	ND	0.0015	0.0020		mg/L	1	12/8/2016 3:35:29 PM	29034
Chromium	0.0036	0.0027	0.0060	J	mg/L	1	12/8/2016 3:35:29 PM	29034
Copper	ND	0.0030	0.0060		mg/L	1	12/8/2016 3:35:29 PM	29034
Iron	7.5	0.20	0.20	*	mg/L	10	12/9/2016 11:54:41 AM	29034
Manganese	1.7	0.0014	0.010	*	mg/L	5	12/9/2016 11:46:24 AM	29034
Silver	0.0091	0.0015	0.0050		mg/L	1	12/8/2016 3:35:29 PM	29034
Zinc	0.032	0.0027	0.010		mg/L	1	12/8/2016 3:35:29 PM	29034
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.017	0.00069	0.0050	*	mg/L	5	11/30/2016 6:39:51 PM	R39071

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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Date Reported: 1/19/2017

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP-01

Project: 2016 4th QTR Ground Water

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Matrix: AQUEOUS

Received Date: 11/15/2016 5:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	0.00079	0.00017	0.00050		mg/L	1	11/28/2016 5:47:38 PM	C39007
Selenium	0.033	0.0011	0.0050		mg/L	5	11/30/2016 6:39:51 PM	R39071
Uranium	0.013	0.000051	0.00050		mg/L	1	11/28/2016 5:47:38 PM	C39007
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.021	0.011	0.050	J*	mg/L	50	12/8/2016 5:06:53 PM	29034
Lead	0.0087	0.00041	0.0025		mg/L	5	12/8/2016 5:01:44 PM	29034
Selenium	0.019	0.0094	0.050	J	mg/L	50	12/8/2016 5:06:53 PM	29034
Uranium	0.013	0.00087	0.0025		mg/L	5	12/8/2016 5:01:44 PM	29034
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	0.000088	0.000053	0.00020	J	mg/L	1	12/1/2016 10:10:56 AM	28920
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Acenaphthylene	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Aniline	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Anthracene	ND	2.5	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Azobenzene	ND	2.7	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Benzoic acid	ND	2.6	20		µg/L	1	11/18/2016 3:56:22 PM	28753
Benzyl alcohol	ND	3.0	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Bis(2-ethylhexyl)phthalate	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Carbazole	ND	2.3	10		µg/L	1	11/18/2016 3:56:22 PM	28753
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
4-Chloroaniline	ND	2.7	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2-Chlorophenol	ND	2.2	10		µg/L	1	11/18/2016 3:56:22 PM	28753
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Chrysene	ND	2.8	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Di-n-octyl phthalate	7.2	2.0	10	J	µg/L	1	11/18/2016 3:56:22 PM	28753

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Client Sample ID: DUP-01

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Matrix: AQUEOUS

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Dibenzofuran	ND	2.5	10		µg/L	1	11/18/2016 3:56:22 PM	28753
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/18/2016 3:56:22 PM	28753
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/18/2016 3:56:22 PM	28753
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Diethyl phthalate	ND	2.7	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/18/2016 3:56:22 PM	28753
2,4-Dimethylphenol	33	3.0	10		µg/L	1	11/18/2016 3:56:22 PM	28753
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/18/2016 3:56:22 PM	28753
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/18/2016 3:56:22 PM	28753
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Fluoranthene	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Fluorene	3.0	2.7	10	J	µg/L	1	11/18/2016 3:56:22 PM	28753
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Hexachloroethane	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Isophorone	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
1-Methylnaphthalene	36	2.9	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2-Methylphenol	ND	2.5	10		µg/L	1	11/18/2016 3:56:22 PM	28753
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/18/2016 3:56:22 PM	28753
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/18/2016 3:56:22 PM	28753
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Naphthalene	3.9	2.6	10	J	µg/L	1	11/18/2016 3:56:22 PM	28753
2-Nitroaniline	ND	2.8	10		µg/L	1	11/18/2016 3:56:22 PM	28753
3-Nitroaniline	ND	2.9	10		µg/L	1	11/18/2016 3:56:22 PM	28753
4-Nitroaniline	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Nitrobenzene	ND	2.8	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2-Nitrophenol	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
4-Nitrophenol	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Pentachlorophenol	ND	2.3	20		µg/L	1	11/18/2016 3:56:22 PM	28753
Phenanthrene	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Phenol	ND	2.0	10		µg/L	1	11/18/2016 3:56:22 PM	28753

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Analytical Report

Lab Order 1611792

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CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP-01

Project: 2016 4th QTR Ground Water

Collection Date: 11/14/2016 11:45:00 AM

Lab ID: 1611792-009

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Pyridine	ND	2.2	10		µg/L	1	11/18/2016 3:56:22 PM	28753
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/18/2016 3:56:22 PM	28753
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/18/2016 3:56:22 PM	28753
Surr: 2-Fluorophenol	41.9	0	15-98.1		%Rec	1	11/18/2016 3:56:22 PM	28753
Surr: Phenol-d5	35.4	0	15-80.7		%Rec	1	11/18/2016 3:56:22 PM	28753
Surr: 2,4,6-Tribromophenol	48.1	0	15-112		%Rec	1	11/18/2016 3:56:22 PM	28753
Surr: Nitrobenzene-d5	65.8	0	27.2-90.7		%Rec	1	11/18/2016 3:56:22 PM	28753
Surr: 2-Fluorobiphenyl	51.9	0	23.3-85.6		%Rec	1	11/18/2016 3:56:22 PM	28753
Surr: 4-Terphenyl-d14	33.6	0	27.6-107		%Rec	1	11/18/2016 3:56:22 PM	28753
EPA METHOD 8260B: VOLATILES							Analyst: RAA	
Benzene	150	0.96	10		µg/L	10	11/18/2016 11:07:42 AM	B38828
Toluene	1.4	0.12	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Ethylbenzene	17	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Methyl tert-butyl ether (MTBE)	250	2.1	10		µg/L	10	11/18/2016 11:07:42 AM	B38828
1,2,4-Trimethylbenzene	5.6	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,2-Dichloroethane (EDC)	0.61	0.12	1.0	J	µg/L	1	11/18/2016 12:17:52 AM	R38783
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Naphthalene	2.2	0.093	2.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1-Methylnaphthalene	51	0.20	4.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Acetone	18	4.9	10		µg/L	1	11/18/2016 12:17:52 AM	R38783
Bromobenzene	ND	0.098	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Bromoform	ND	0.10	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Bromomethane	ND	0.78	3.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
2-Butanone	5.8	0.74	10	J	µg/L	1	11/18/2016 12:17:52 AM	R38783
Carbon disulfide	ND	0.60	10		µg/L	1	11/18/2016 12:17:52 AM	R38783
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Chloroethane	ND	0.19	2.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Chloroform	ND	0.089	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Chloromethane	ND	0.21	3.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783

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EPA METHOD 8260B: VOLATILES							Analyst: RAA	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Dibromomethane	ND	0.12	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,1-Dichloroethane	1.3	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
2-Hexanone	ND	0.84	10		µg/L	1	11/18/2016 12:17:52 AM	R38783
Isopropylbenzene	2.4	0.10	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
4-Isopropyltoluene	0.71	0.14	1.0	J	µg/L	1	11/18/2016 12:17:52 AM	R38783
4-Methyl-2-pentanone	0.80	0.43	10	J	µg/L	1	11/18/2016 12:17:52 AM	R38783
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
n-Butylbenzene	0.70	0.16	3.0	J	µg/L	1	11/18/2016 12:17:52 AM	R38783
n-Propylbenzene	2.6	0.13	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
sec-Butylbenzene	0.60	0.12	1.0	J	µg/L	1	11/18/2016 12:17:52 AM	R38783
Styrene	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
tert-Butylbenzene	0.13	0.12	1.0	J	µg/L	1	11/18/2016 12:17:52 AM	R38783
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/18/2016 12:17:52 AM	R38783
Xylenes, Total	7.6	0.37	1.5		µg/L	1	11/18/2016 12:17:52 AM	R38783
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	11/18/2016 12:17:52 AM	R38783

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 1611792

Date Reported: 1/19/2017

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP-01

Project: 2016 4th QTR Ground Water

Collection Date: 11/14/2016 11:45:00 AM

Lab ID: 1611792-009

Matrix: AQUEOUS

Received Date: 11/15/2016 5:15:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: RAA	
Surr: 4-Bromofluorobenzene	83.4	0	70-130		%Rec	1	11/18/2016 12:17:52 AM	R38783
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	11/18/2016 12:17:52 AM	R38783
Surr: Toluene-d8	103	0	70-130		%Rec	1	11/18/2016 12:17:52 AM	R38783

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 1611792

Date Reported: 1/19/2017

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 2016 4th QTR Ground Water

Collection Date:

Lab ID: 1611792-010

Matrix: TRIP BLANK

Received Date: 11/15/2016 5:15:00 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	11/17/2016 6:32:43 PM	R38783
Toluene	ND	0.12	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Naphthalene	ND	0.093	2.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Acetone	5.5	4.9	10	J	µg/L	1	11/17/2016 6:32:43 PM	R38783
Bromobenzene	ND	0.098	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Bromoform	ND	0.10	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Bromomethane	ND	0.78	3.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
2-Butanone	ND	0.74	10		µg/L	1	11/17/2016 6:32:43 PM	R38783
Carbon disulfide	ND	0.60	10		µg/L	1	11/17/2016 6:32:43 PM	R38783
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Chloroethane	ND	0.19	2.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Chloroform	ND	0.089	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Chloromethane	ND	0.21	3.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Dibromomethane	ND	0.12	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/17/2016 6:32:43 PM	R38783

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 1611792

Date Reported: 1/19/2017

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 2016 4th QTR Ground Water

Collection Date:

Lab ID: 1611792-010

Matrix: TRIP BLANK

Received Date: 11/15/2016 5:15:00 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	11/17/2016 6:32:43 PM	R38783
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
2-Hexanone	ND	0.84	10		µg/L	1	11/17/2016 6:32:43 PM	R38783
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/17/2016 6:32:43 PM	R38783
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Styrene	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/17/2016 6:32:43 PM	R38783
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/17/2016 6:32:43 PM	R38783
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	11/17/2016 6:32:43 PM	R38783
Surr: 4-Bromofluorobenzene	98.4	0	70-130		%Rec	1	11/17/2016 6:32:43 PM	R38783
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	11/17/2016 6:32:43 PM	R38783
Surr: Toluene-d8	98.5	0	70-130		%Rec	1	11/17/2016 6:32:43 PM	R38783

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
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 161117029
Project Name: 1611792

Analytical Results Report

Sample Number	161117029-001	Sampling Date	11/14/2016	Date/Time Received	11/17/2016 10:45 AM
Client Sample ID	1611792-007G / OAPIS-1	Sampling Time	1:05 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0837	mg/L	0.01	11/23/2016	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.

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 #: 161117029
Project Name: 1611792

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.504	mg/L	0.5	100.8	90-110	11/23/2016	11/23/2016

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
161115051-001	Cyanide	ND	0.506	mg/L	0.5	101.2	90-110	11/23/2016	11/23/2016

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.507	mg/L	0.5	101.4	0.2	0-20	11/23/2016	11/23/2016

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	11/23/2016	11/23/2016

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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID MB-A	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals
Client ID: PBW	Batch ID: A39280	RunNo: 39280
Prep Date:	Analysis Date: 12/9/2016	SeqNo: 1229491 Units: mg/L

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

Sample ID LCS-A	SampType: LCS	TestCode: EPA Method 200.7: Dissolved Metals
Client ID: LCSW	Batch ID: A39280	RunNo: 39280
Prep Date:	Analysis Date: 12/9/2016	SeqNo: 1229492 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	0.49	0.0020	0.5000	0	97.7	85	115			
Calcium	47	1.0	50.00	0	94.0	85	115			
Chromium	0.47	0.0060	0.5000	0	93.2	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.47	0.020	0.5000	0	93.1	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.47	0.0020	0.5000	0	93.8	85	115			
Potassium	51	1.0	50.00	0	101	85	115			
Silver	0.097	0.0050	0.1000	0	97.1	85	115			
Zinc	0.44	0.010	0.5000	0	89.0	85	115			

Sample ID LLCS-A	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals
Client ID: BatchQC	Batch ID: A39280	RunNo: 39280
Prep Date:	Analysis Date: 12/9/2016	SeqNo: 1229493 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	118	50	150			
Cadmium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0067	0.0060	0.006000	0	111	50	150			
Iron	0.025	0.020	0.02000	0	126	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	LLLCS-A		SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: A39280		RunNo: 39280					
Prep Date:			Analysis Date: 12/9/2016		SeqNo: 1229493		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.54	1.0	0.5000	0	107	50	150			J
Manganese	0.0020	0.0020	0.002000	0	98.0	50	150			J
Potassium	0.66	1.0	0.5000	0	132	50	150			J
Silver	0.0042	0.0050	0.005000	0	85.0	50	150			J
Zinc	0.0050	0.010	0.005000	0	99.8	50	150			J

Sample ID	MB-A	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: A39337			RunNo: 39337					
Prep Date:		Analysis Date: 12/12/2016			SeqNo: 1231202		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID	LCS-A		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: A39337		RunNo: 39337					
Prep Date:			Analysis Date: 12/12/2016		SeqNo: 1231203		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	96.6	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Iron	0.48	0.020	0.5000	0	97.0	85	115			
Manganese	0.47	0.0020	0.5000	0	94.4	85	115			
Sodium	51	1.0	50.00	0	101	85	115			

Sample ID	LLLCS-A		SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: A39337		RunNo: 39337					
Prep Date:			Analysis Date: 12/12/2016		SeqNo: 1231204		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	102	50	150			
Calcium	0.60	1.0	0.5000	0	119	50	150			J
Iron	0.019	0.020	0.02000	0	96.6	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Sodium	0.54	1.0	0.5000	0	109	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	MB-29034	SampType: MBLK			TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID: 29034			RunNo: 39247					
Prep Date:	12/6/2016	Analysis Date: 12/8/2016			SeqNo: 1228707		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	0.00038	0.0020								J
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-29034		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 29034		RunNo: 39247					
Prep Date:	12/6/2016		Analysis Date: 12/8/2016		SeqNo: 1228708		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	101	85	115			
Cadmium	0.53	0.0020	0.5000	0	105	85	115			
Chromium	0.52	0.0060	0.5000	0	103	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Silver	0.097	0.0050	0.1000	0	97.4	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Sample ID	LLLCS-29034	SampType: LCSLL			TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID: 29034			RunNo: 39247					
Prep Date:	12/6/2016	Analysis Date: 12/8/2016			SeqNo: 1228709		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	80.5	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0050	0.0060	0.006000	0	83.2	50	150			J
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0042	0.0050	0.005000	0	84.8	50	150			J
Zinc	0.0059	0.010	0.005000	0	119	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	1611792-002EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-30		Batch ID:	29034		RunNo:	39247			
Prep Date:	12/6/2016		Analysis Date:	12/8/2016		SeqNo:	1228718		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.62	0.0020	0.5000	0.1061	103	70	130			
Cadmium	0.53	0.0020	0.5000	0	106	70	130			
Chromium	0.52	0.0060	0.5000	0	104	70	130			
Copper	0.55	0.0060	0.5000	0	109	70	130			
Iron	0.58	0.020	0.5000	0.09464	97.4	70	130			
Manganese	0.54	0.0020	0.5000	0.03820	100	70	130			
Zinc	0.52	0.010	0.5000	0	104	70	130			

Sample ID	1611792-002EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-30		Batch ID:	29034		RunNo:	39247			
Prep Date:	12/6/2016		Analysis Date:	12/8/2016		SeqNo:	1228719		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.61	0.0020	0.5000	0.1061	101	70	130	1.65	20	
Cadmium	0.52	0.0020	0.5000	0	105	70	130	0.737	20	
Chromium	0.52	0.0060	0.5000	0	103	70	130	0.734	20	
Copper	0.54	0.0060	0.5000	0	107	70	130	1.97	20	
Iron	0.58	0.020	0.5000	0.09464	96.7	70	130	0.611	20	
Manganese	0.53	0.0020	0.5000	0.03820	98.0	70	130	1.96	20	
Zinc	0.51	0.010	0.5000	0	103	70	130	0.815	20	

Sample ID	1611792-002EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-30		Batch ID:	29034		RunNo:	39280			
Prep Date:	12/6/2016		Analysis Date:	12/9/2016		SeqNo:	1229344		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.014	0.0050	0.1000	0	14.3	70	130			S

Sample ID	1611792-002EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-30		Batch ID:	29034		RunNo:	39280			
Prep Date:	12/6/2016		Analysis Date:	12/9/2016		SeqNo:	1229345		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.015	0.0050	0.1000	0	14.8	70	130	3.50	20	S

Sample ID	1611792-002EPS		SampType:	PS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	OW-30		Batch ID:	29034		RunNo:	39280			
Prep Date:			Analysis Date:	12/9/2016		SeqNo:	1229346		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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	1611792-002EPS			SampType:	PS			TestCode:	EPA Method 200.7: Total Metals		
Client ID:	OW-30			Batch ID:	29034			RunNo:	39280		
Prep Date:				Analysis Date:	12/9/2016			SeqNo:	1229346		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	93.6	85	115				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: C39007		RunNo: 39007					
Prep Date:			Analysis Date: 11/28/2016		SeqNo: 1220004		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	96.9	85	115			
Uranium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID	LLCS		SampType: LCSLL		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: C39007		RunNo: 39007					
Prep Date:			Analysis Date: 11/28/2016		SeqNo: 1220005		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID: C39007			RunNo: 39007					
Prep Date:		Analysis Date: 11/28/2016			SeqNo: 1220009		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R39071		RunNo: 39071					
Prep Date:			Analysis Date: 11/30/2016		SeqNo: 1222065		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	102	85	115			
Selenium	0.027	0.0010	0.02500	0	107	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID	LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID: R39071			RunNo: 39071					
Prep Date:		Analysis Date: 11/30/2016			SeqNo: 1222066		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	101	85	115			
Selenium	0.027	0.0010	0.02500	0	108	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	LLLCS		SampType:	LCSLL		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R39071		RunNo:	39071			
Prep Date:			Analysis Date:	11/30/2016		SeqNo:	1222067	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.5	50	150			J
Selenium	0.00097	0.0010	0.001000	0	97.3	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.4	50	150			J

Sample ID	LLLCS		SampType:	LCSLL		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R39071		RunNo:	39071			
Prep Date:			Analysis Date:	11/30/2016		SeqNo:	1222068	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	101	50	150			
Selenium	0.0011	0.0010	0.001000	0	105	50	150			
Uranium	0.00048	0.00050	0.0005000	0	96.9	50	150			J

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	PBW		Batch ID:	R39071		RunNo:	39071			
Prep Date:			Analysis Date:	11/30/2016		SeqNo:	1222069	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								

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	PBW		Batch ID:	R39071		RunNo:	39071			
Prep Date:			Analysis Date:	11/30/2016		SeqNo:	1222070	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	MB-29034		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	29034		RunNo:	39218			
Prep Date:	12/6/2016		Analysis Date:	12/7/2016		SeqNo:	1227106	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-29034		SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW		Batch ID:	29034		RunNo:	39218			
Prep Date:	12/6/2016		Analysis Date:	12/7/2016		SeqNo:	1227108	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID	MSLLCS-29034		SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	BatchQC		Batch ID:	29034		RunNo:	39218			
Prep Date:	12/6/2016		Analysis Date:	12/7/2016		SeqNo:	1227110	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	91.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.1	50	150			J
Uranium	0.00037	0.00050	0.0005000	0	74.0	50	150			J

Sample ID	1611792-003EMSL		SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	NAPIS-2		Batch ID:	29034		RunNo:	39218			
Prep Date:			Analysis Date:	12/7/2016		SeqNo:	1227789	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.021	0.00050	0.01250	0.007035	115	70	130			
Uranium	0.017	0.00050	0.01250	0.0008523	129	70	130			

Sample ID	1611792-004EMSDL		SampType:	MSDLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	KA-3		Batch ID:	29034		RunNo:	39218			
Prep Date:			Analysis Date:	12/7/2016		SeqNo:	1227791	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.014	0.00050	0.01250	0.0002496	112	70	130	0.639	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	1611792-004EMSL				SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	KA-3				Batch ID:	29034		RunNo:	39218		
Prep Date:					Analysis Date:	12/7/2016		SeqNo:	1227792	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.014	0.00050	0.01250	0.0002496	113	70	130				

Sample ID	1611792-003EMSL				SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	NAPIS-2				Batch ID:	29034		RunNo:	39273		
Prep Date:	12/6/2016				Analysis Date:	12/8/2016		SeqNo:	1229128	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.035	0.0050	0.02500	0.008427	106	70	130				

Sample ID	1611792-004EMSDL				SampType:	MSDLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	KA-3				Batch ID:	29034		RunNo:	39273		
Prep Date:	12/6/2016				Analysis Date:	12/8/2016		SeqNo:	1229131	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.033	0.0050	0.02500	0.006755	104	70	130	0.799	20		
Uranium	0.021	0.0025	0.01250	0.008921	100	70	130	3.01	20		

Sample ID	1611792-004EMSL				SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	KA-3				Batch ID:	29034		RunNo:	39273		
Prep Date:	12/6/2016				Analysis Date:	12/8/2016		SeqNo:	1229132	Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.033	0.0050	0.02500	0.006755	105	70	130				
Uranium	0.022	0.0025	0.01250	0.008921	105	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	MB-28920		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 28920		RunNo: 39070					
Prep Date:	11/30/2016		Analysis Date: 12/1/2016		SeqNo: 1222324		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	0.000084	0.00020								J

Sample ID	LCS-28920		SampType: LCS		TestCode: EPA Method 245.1: Mercury					
Client ID:	LCSW		Batch ID: 28920		RunNo: 39070					
Prep Date:	11/30/2016		Analysis Date: 12/1/2016		SeqNo: 1222325		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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R38771		RunNo: 38771							
Prep Date:	Analysis Date: 11/16/2016		SeqNo: 1211326		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.11	0.50								J
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	0.14	0.50								J
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: R38771		RunNo: 38771							
Prep Date:	Analysis Date: 11/16/2016		SeqNo: 1211327		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	95.6	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.7	90	110			
Bromide	2.5	0.10	2.500	0	98.1	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P)	4.9	0.50	5.000	0	98.4	90	110			
Sulfate	9.8	0.50	10.00	0	98.4	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R38979		RunNo: 38979							
Prep Date:	Analysis Date: 11/23/2016		SeqNo: 1218934		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.11	0.50								J

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R38979		RunNo: 38979							
Prep Date:	Analysis Date: 11/23/2016		SeqNo: 1218937		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.6	0.50	5.000	0	93.0	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	MB	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R39076	RunNo:	39076					
Prep Date:		Analysis Date:	11/30/2016	SeqNo:	1222379	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								

Sample ID	LCS	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R39076	RunNo:	39076					
Prep Date:		Analysis Date:	11/30/2016	SeqNo:	1222380	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.7	0.50	5.000	0	93.0	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	A39105	RunNo:	39105					
Prep Date:		Analysis Date:	12/1/2016	SeqNo:	1223302	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:	A39105	RunNo:	39105					
Prep Date:		Analysis Date:	12/1/2016	SeqNo:	1223303	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	104	90	110			

Sample ID	MB	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R39175	RunNo:	39175					
Prep Date:		Analysis Date:	12/5/2016	SeqNo:	1225515	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:	R39175	RunNo:	39175					
Prep Date:		Analysis Date:	12/5/2016	SeqNo:	1225516	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.4	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	MB-28776		SampType: MBLK		TestCode: EPA Method 8011/504.1: EDB					
Client ID:	PBW		Batch ID: 28776		RunNo: 38889					
Prep Date:	11/21/2016		Analysis Date: 11/21/2016		SeqNo: 1215712		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-28776		SampType: LCS		TestCode: EPA Method 8011/504.1: EDB					
Client ID:	LCSW		Batch ID: 28776		RunNo: 38889					
Prep Date:	11/21/2016		Analysis Date: 11/21/2016		SeqNo: 1215714		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	108	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	MB-28698		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW		Batch ID: 28698		RunNo: 38769					
Prep Date:	11/16/2016		Analysis Date: 11/17/2016		SeqNo: 1212026		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	1.0		1.000		104	77.1	144			

Sample ID	LCS-28698		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 28698		RunNo: 38769					
Prep Date:	11/16/2016		Analysis Date: 11/17/2016		SeqNo: 1212027		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	0	115	63.2	155			
Surr: DNOP	0.52		0.5000		104	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	G38747	RunNo:	38747					
Prep Date:		Analysis Date:	11/16/2016	SeqNo:	1210964	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	19		20.00		93.4	66.4	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	G38747	RunNo:	38747					
Prep Date:		Analysis Date:	11/16/2016	SeqNo:	1210965	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.4	80	120			
Surr: BFB	19		20.00		97.0	66.4	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R38783			RunNo: 38783					
Prep Date:	Analysis Date: 11/17/2016			SeqNo: 1212338		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	96.5	70	130			
Chlorobenzene	18	1.0	20.00	0	92.0	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.0	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R38783			RunNo: 38783					
Prep Date:		Analysis Date: 11/17/2016			SeqNo: 1212339		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	0.32	4.0								J
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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R38783			RunNo: 38783					
Prep Date:		Analysis Date: 11/17/2016			SeqNo: 1212339	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	0.49	1.0								J
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	0.31	3.0								J
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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R38783			RunNo: 38783						
Prep Date:	Analysis Date: 11/17/2016			SeqNo: 1212339		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		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: B38828			RunNo: 38828						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1213801		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B38828			RunNo: 38828						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1213802		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.7	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	11		10.00		106	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	Ics-28753		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 28753		RunNo: 38838					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213707		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	61	10	100.0	0	61.4	42.9	100			
4-Chloro-3-methylphenol	120	10	200.0	0	62.3	36.2	110			
2-Chlorophenol	110	10	200.0	0	53.9	33.4	97.8			
1,4-Dichlorobenzene	40	10	100.0	0	39.9	32.8	79.3			
2,4-Dinitrotoluene	62	10	100.0	0	62.3	34.9	107			
N-Nitrosodi-n-propylamine	63	10	100.0	0	63.1	30.7	111			
4-Nitrophenol	60	10	200.0	0	30.1	15	91.9			
Pentachlorophenol	96	20	200.0	0	48.2	33.3	93.5			
Phenol	66	10	200.0	0	32.8	20.9	86.4			
Pyrene	59	10	100.0	0	59.1	45.6	111			
1,2,4-Trichlorobenzene	52	10	100.0	0	51.9	38.7	88.2			
Surr: 2-Fluorophenol	75		200.0		37.5	15	98.1			
Surr: Phenol-d5	64		200.0		31.8	15	80.7			
Surr: 2,4,6-Tribromophenol	120		200.0		59.0	15	112			
Surr: Nitrobenzene-d5	62		100.0		61.9	27.2	90.7			
Surr: 2-Fluorobiphenyl	53		100.0		53.5	23.3	85.6			
Surr: 4-Terphenyl-d14	53		100.0		52.9	27.6	107			

Sample ID	Icsd-28753		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 28753		RunNo: 38838					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213708		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	51	10	100.0	0	50.7	42.9	100	19.0	37.4	
4-Chloro-3-methylphenol	98	10	200.0	0	48.9	36.2	110	24.0	26.8	
2-Chlorophenol	97	10	200.0	0	48.3	33.4	97.8	11.0	30.3	
1,4-Dichlorobenzene	36	10	100.0	0	36.2	32.8	79.3	9.67	32	
2,4-Dinitrotoluene	53	10	100.0	0	53.1	34.9	107	16.0	36.7	
N-Nitrosodi-n-propylamine	55	10	100.0	0	54.9	30.7	111	14.0	29.9	
4-Nitrophenol	52	10	200.0	0	25.8	15	91.9	15.5	28.8	
Pentachlorophenol	80	20	200.0	0	39.8	33.3	93.5	19.0	38.2	
Phenol	56	10	200.0	0	28.0	20.9	86.4	15.9	39.8	
Pyrene	51	10	100.0	0	50.8	45.6	111	15.2	28.3	
1,2,4-Trichlorobenzene	44	10	100.0	0	44.4	38.7	88.2	15.6	39.8	
Surr: 2-Fluorophenol	69		200.0		34.4	15	98.1	0	0	
Surr: Phenol-d5	57		200.0		28.4	15	80.7	0	0	
Surr: 2,4,6-Tribromophenol	97		200.0		48.5	15	112	0	0	
Surr: Nitrobenzene-d5	53		100.0		53.0	27.2	90.7	0	0	
Surr: 2-Fluorobiphenyl	45		100.0		44.8	23.3	85.6	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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	lcsd-28753		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 28753		RunNo: 38838					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213708		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	44		100.0		44.3	27.6	107	0	0	

Sample ID	mb-28753	SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles						
Client ID:	PBW	Batch ID: 28753		RunNo: 38838						
Prep Date:	11/18/2016	Analysis Date: 11/18/2016		SeqNo: 1213709		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	8.4	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	6.4	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	7.7	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								

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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	mb-28753		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28753		RunNo: 38838					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213709		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	7.0	20								J
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								

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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	mb-28753		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28753		RunNo: 38838					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213709		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	91		200.0		45.4	15	98.1			
Surr: Phenol-d5	68		200.0		34.0	15	80.7			
Surr: 2,4,6-Tribromophenol	130		200.0		66.8	15	112			
Surr: Nitrobenzene-d5	62		100.0		62.4	27.2	90.7			
Surr: 2-Fluorobiphenyl	56		100.0		56.0	23.3	85.6			
Surr: 4-Terphenyl-d14	56		100.0		56.1	27.6	107			

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#: 1611792

19-Jan-17

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR Ground Water

Sample ID	MB-R39585		SampType:	MBLK		TestCode:	EPA 335.4: Total Cyanide Subbed				
Client ID:	PBW		Batch ID:	R39585		RunNo:	39585				
Prep Date:			Analysis Date:	11/23/2016		SeqNo:	1240031	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cyanide	ND	0.0100									

Sample ID	LCS-R39585			SampType:	LCS		TestCode:	EPA 335.4: Total Cyanide Subbed			
Client ID:	LCSW			Batch ID:	R39585		RunNo:	39585			
Prep Date:				Analysis Date:	11/23/2016		SeqNo:	1240032	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cyanide	0.504		0.5000	0	101	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



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: 1611792

RcptNo: 1

Received by/date:

km

11/15/16

Logged By: Ashley Gallegos

11/15/2016 5:15:00 PM

Completed By: Ashley Gallegos

11/16/2016 8:51:07 AM

Reviewed By:

as

11/16/16

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: 23, 1
(<2 or >12 unless noted)
Adjusted? yes
Checked by: *Jc*

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 1mL HNO₃ to -005E, -007F, and -009F and 0.5mL HNO₃ to -009E

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes			

11/16/16 @ 1104

Jc



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

December 14, 2016

Cheryl Johnson

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

RE: 2016 4th Qtr Ground Water

OrderNo.: 1611976

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 11/17/2016 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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 7:00:00 AM

Lab ID: 1611976-001

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 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	11/21/2016 7:57:06 PM	A38885
Toluene	ND	0.12	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Naphthalene	ND	0.093	2.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Acetone	ND	4.9	10		µg/L	1	11/21/2016 7:57:06 PM	A38885
Bromobenzene	ND	0.098	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Bromoform	ND	0.10	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Bromomethane	ND	0.78	3.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
2-Butanone	ND	0.74	10		µg/L	1	11/21/2016 7:57:06 PM	A38885
Carbon disulfide	ND	0.60	10		µg/L	1	11/21/2016 7:57:06 PM	A38885
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Chloroethane	ND	0.19	2.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Chloroform	ND	0.089	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Chloromethane	ND	0.21	3.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Dibromomethane	ND	0.12	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/21/2016 7:57:06 PM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 7:00:00 AM

Lab ID: 1611976-001

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 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	11/21/2016 7:57:06 PM	A38885
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
2-Hexanone	ND	0.84	10		µg/L	1	11/21/2016 7:57:06 PM	A38885
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/21/2016 7:57:06 PM	A38885
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Styrene	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/21/2016 7:57:06 PM	A38885
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/21/2016 7:57:06 PM	A38885
Surr: 1,2-Dichloroethane-d4	98.9	0	70-130		%Rec	1	11/21/2016 7:57:06 PM	A38885
Surr: 4-Bromofluorobenzene	95.1	0	70-130		%Rec	1	11/21/2016 7:57:06 PM	A38885
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	11/21/2016 7:57:06 PM	A38885
Surr: Toluene-d8	101	0	70-130		%Rec	1	11/21/2016 7:57:06 PM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-5

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 9:12:00 AM

Lab ID: 1611976-002

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	4.9	0.69	1.0		mg/L	1	11/21/2016 2:03:07 PM	28752
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/21/2016 2:03:07 PM	28752
Surr: DNOP	103	0	77.1-144		%Rec	1	11/21/2016 2:03:07 PM	28752
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	7.6	0.25	0.50		mg/L	10	11/21/2016 3:22:28 PM	G38887
Surr: BFB	113	0	66.4-120		%Rec	10	11/21/2016 3:22:28 PM	G38887
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	720	4.8	50		µg/L	50	11/22/2016 9:56:27 AM	R38929
Toluene	3.5	0.59	5.0	J	µg/L	5	11/21/2016 8:54:46 PM	A38885
Ethylbenzene	340	0.56	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Methyl tert-butyl ether (MTBE)	1.2	1.1	5.0	J	µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2,4-Trimethylbenzene	62	0.55	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,3,5-Trimethylbenzene	14	0.58	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2-Dichloroethane (EDC)	ND	0.58	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2-Dibromoethane (EDB)	ND	0.56	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Naphthalene	140	0.46	10		µg/L	5	11/21/2016 8:54:46 PM	A38885
1-Methylnaphthalene	120	1.0	20		µg/L	5	11/21/2016 8:54:46 PM	A38885
2-Methylnaphthalene	120	0.79	20		µg/L	5	11/21/2016 8:54:46 PM	A38885
Acetone	ND	25	50		µg/L	5	11/21/2016 8:54:46 PM	A38885
Bromobenzene	ND	0.49	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Bromodichloromethane	ND	0.70	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Bromoform	ND	0.51	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Bromomethane	ND	3.9	15		µg/L	5	11/21/2016 8:54:46 PM	A38885
2-Butanone	ND	3.7	50		µg/L	5	11/21/2016 8:54:46 PM	A38885
Carbon disulfide	ND	3.0	50		µg/L	5	11/21/2016 8:54:46 PM	A38885
Carbon Tetrachloride	ND	0.54	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Chlorobenzene	ND	0.57	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Chloroethane	ND	0.96	10		µg/L	5	11/21/2016 8:54:46 PM	A38885
Chloroform	ND	0.44	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Chloromethane	ND	1.1	15		µg/L	5	11/21/2016 8:54:46 PM	A38885
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
4-Chlorotoluene	ND	0.64	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
cis-1,2-DCE	ND	0.62	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
cis-1,3-Dichloropropene	ND	0.53	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2-Dibromo-3-chloropropane	ND	1.2	10		µg/L	5	11/21/2016 8:54:46 PM	A38885
Dibromochloromethane	ND	0.43	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Dibromomethane	ND	0.60	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2-Dichlorobenzene	ND	2.0	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885

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: RW-5

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 9:12:00 AM

Lab ID: 1611976-002

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	0.72	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,4-Dichlorobenzene	ND	0.71	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Dichlorodifluoromethane	ND	1.8	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,1-Dichloroethane	ND	0.54	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,1-Dichloroethene	ND	0.54	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2-Dichloropropane	ND	0.55	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,3-Dichloropropane	ND	0.78	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
2,2-Dichloropropane	ND	0.83	10		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,1-Dichloropropene	ND	0.67	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Hexachlorobutadiene	ND	0.99	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
2-Hexanone	ND	4.2	50		µg/L	5	11/21/2016 8:54:46 PM	A38885
Isopropylbenzene	20	0.52	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
4-Isopropyltoluene	5.6	0.70	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
4-Methyl-2-pentanone	ND	2.1	50		µg/L	5	11/21/2016 8:54:46 PM	A38885
Methylene Chloride	ND	0.94	15		µg/L	5	11/21/2016 8:54:46 PM	A38885
n-Butylbenzene	12	0.80	15	J	µg/L	5	11/21/2016 8:54:46 PM	A38885
n-Propylbenzene	43	0.66	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
sec-Butylbenzene	7.1	0.62	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Styrene	ND	0.55	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
tert-Butylbenzene	0.67	0.58	5.0	J	µg/L	5	11/21/2016 8:54:46 PM	A38885
1,1,1,2-Tetrachloroethane	ND	0.56	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,1,2,2-Tetrachloroethane	ND	0.64	10		µg/L	5	11/21/2016 8:54:46 PM	A38885
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
trans-1,2-DCE	ND	2.0	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
trans-1,3-Dichloropropene	ND	0.52	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2,3-Trichlorobenzene	ND	0.56	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2,4-Trichlorobenzene	ND	0.66	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,1,1-Trichloroethane	ND	0.46	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,1,2-Trichloroethane	ND	0.64	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Trichloroethene (TCE)	ND	0.88	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Trichlorofluoromethane	ND	1.0	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
1,2,3-Trichloropropane	ND	1.0	10		µg/L	5	11/21/2016 8:54:46 PM	A38885
Vinyl chloride	ND	0.98	5.0		µg/L	5	11/21/2016 8:54:46 PM	A38885
Xylenes, Total	130	1.8	7.5		µg/L	5	11/21/2016 8:54:46 PM	A38885
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	5	11/21/2016 8:54:46 PM	A38885
Surr: 4-Bromofluorobenzene	84.4	0	70-130		%Rec	5	11/21/2016 8:54:46 PM	A38885
Surr: Dibromofluoromethane	88.5	0	70-130		%Rec	5	11/21/2016 8:54:46 PM	A38885
Surr: Toluene-d8	98.8	0	70-130		%Rec	5	11/21/2016 8:54:46 PM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-6

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 9:44:00 AM

Lab ID: 1611976-003

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	240	6.9	10		mg/L	10	11/21/2016 4:56:35 PM	28752
Motor Oil Range Organics (MRO)	ND	50	50		mg/L	10	11/21/2016 4:56:35 PM	28752
Surr: DNOP	0	0	77.1-144	S	%Rec	10	11/21/2016 4:56:35 PM	28752
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	7.1	0.51	1.0		mg/L	20	11/21/2016 4:35:33 PM	G38887
Surr: BFB	105	0	66.4-120		%Rec	20	11/21/2016 4:35:33 PM	G38887
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	270	0.96	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Toluene	120	1.2	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Ethylbenzene	290	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Methyl tert-butyl ether (MTBE)	14	2.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2,4-Trimethylbenzene	60	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,3,5-Trimethylbenzene	100	1.2	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2-Dichloroethane (EDC)	ND	1.2	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2-Dibromoethane (EDB)	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Naphthalene	610	0.93	20		µg/L	10	11/21/2016 11:47:22 PM	A38885
1-Methylnaphthalene	330	2.0	40		µg/L	10	11/21/2016 11:47:22 PM	A38885
2-Methylnaphthalene	350	1.6	40		µg/L	10	11/21/2016 11:47:22 PM	A38885
Acetone	ND	49	100		µg/L	10	11/21/2016 11:47:22 PM	A38885
Bromobenzene	ND	0.98	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Bromodichloromethane	ND	1.4	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Bromoform	ND	1.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Bromomethane	ND	7.8	30		µg/L	10	11/21/2016 11:47:22 PM	A38885
2-Butanone	ND	7.4	100		µg/L	10	11/21/2016 11:47:22 PM	A38885
Carbon disulfide	ND	6.0	100		µg/L	10	11/21/2016 11:47:22 PM	A38885
Carbon Tetrachloride	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Chlorobenzene	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Chloroethane	ND	1.9	20		µg/L	10	11/21/2016 11:47:22 PM	A38885
Chloroform	ND	0.89	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Chloromethane	ND	2.1	30		µg/L	10	11/21/2016 11:47:22 PM	A38885
2-Chlorotoluene	ND	4.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
4-Chlorotoluene	ND	1.3	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
cis-1,2-DCE	ND	1.2	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
cis-1,3-Dichloropropene	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2-Dibromo-3-chloropropane	ND	2.3	20		µg/L	10	11/21/2016 11:47:22 PM	A38885
Dibromochloromethane	ND	0.87	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Dibromomethane	ND	1.2	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2-Dichlorobenzene	ND	4.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-6

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 9:44:00 AM

Lab ID: 1611976-003

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	1.4	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,4-Dichlorobenzene	ND	1.4	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Dichlorodifluoromethane	ND	3.6	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,1-Dichloroethane	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,1-Dichloroethene	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2-Dichloropropane	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,3-Dichloropropane	ND	1.6	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
2,2-Dichloropropane	ND	1.7	20		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,1-Dichloropropene	ND	1.3	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Hexachlorobutadiene	ND	2.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
2-Hexanone	ND	8.4	100		µg/L	10	11/21/2016 11:47:22 PM	A38885
Isopropylbenzene	24	1.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
4-Isopropyltoluene	11	1.4	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
4-Methyl-2-pentanone	ND	4.3	100		µg/L	10	11/21/2016 11:47:22 PM	A38885
Methylene Chloride	ND	1.9	30		µg/L	10	11/21/2016 11:47:22 PM	A38885
n-Butylbenzene	15	1.6	30	J	µg/L	10	11/21/2016 11:47:22 PM	A38885
n-Propylbenzene	48	1.3	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
sec-Butylbenzene	8.8	1.2	10	J	µg/L	10	11/21/2016 11:47:22 PM	A38885
Styrene	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
tert-Butylbenzene	1.4	1.2	10	J	µg/L	10	11/21/2016 11:47:22 PM	A38885
1,1,1,2-Tetrachloroethane	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,1,2,2-Tetrachloroethane	ND	1.3	20		µg/L	10	11/21/2016 11:47:22 PM	A38885
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
trans-1,2-DCE	ND	4.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
trans-1,3-Dichloropropene	ND	1.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2,3-Trichlorobenzene	ND	1.1	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2,4-Trichlorobenzene	ND	1.3	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,1,1-Trichloroethane	ND	0.91	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,1,2-Trichloroethane	ND	1.3	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Trichloroethene (TCE)	ND	1.8	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Trichlorofluoromethane	ND	2.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
1,2,3-Trichloropropane	ND	2.0	20		µg/L	10	11/21/2016 11:47:22 PM	A38885
Vinyl chloride	ND	2.0	10		µg/L	10	11/21/2016 11:47:22 PM	A38885
Xylenes, Total	780	3.7	15		µg/L	10	11/21/2016 11:47:22 PM	A38885
Surr: 1,2-Dichloroethane-d4	97.9	0	70-130		%Rec	10	11/21/2016 11:47:22 PM	A38885
Surr: 4-Bromofluorobenzene	95.1	0	70-130		%Rec	10	11/21/2016 11:47:22 PM	A38885
Surr: Dibromofluoromethane	101	0	70-130		%Rec	10	11/21/2016 11:47:22 PM	A38885
Surr: Toluene-d8	99.9	0	70-130		%Rec	10	11/21/2016 11:47:22 PM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-2

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 12:10:00 PM

Lab ID: 1611976-004

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	8.4	0.69	1.0		mg/L	1	11/21/2016 2:46:23 PM	28752
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/21/2016 2:46:23 PM	28752
Surr: DNOP	101	0	77.1-144		%Rec	1	11/21/2016 2:46:23 PM	28752
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	130	5.1	10		mg/L	200	11/21/2016 4:59:56 PM	G38887
Surr: BFB	93.1	0	66.4-120		%Rec	200	11/21/2016 4:59:56 PM	G38887
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	38000	190	2000		µg/L	2000	11/22/2016 12:16:08 AM	A38885
Toluene	3400	24	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Ethylbenzene	1200	22	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Methyl tert-butyl ether (MTBE)	1700	42	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2,4-Trimethylbenzene	200	22	200	J	µg/L	200	11/22/2016 12:44:55 AM	A38885
1,3,5-Trimethylbenzene	49	23	200	J	µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2-Dichloroethane (EDC)	ND	23	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2-Dibromoethane (EDB)	ND	22	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Naphthalene	150	19	400	J	µg/L	200	11/22/2016 12:44:55 AM	A38885
1-Methylnaphthalene	130	41	800	J	µg/L	200	11/22/2016 12:44:55 AM	A38885
2-Methylnaphthalene	ND	32	800		µg/L	200	11/22/2016 12:44:55 AM	A38885
Acetone	ND	980	2000		µg/L	200	11/22/2016 12:44:55 AM	A38885
Bromobenzene	ND	20	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Bromodichloromethane	ND	28	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Bromoform	ND	20	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Bromomethane	ND	160	600		µg/L	200	11/22/2016 12:44:55 AM	A38885
2-Butanone	ND	150	2000		µg/L	200	11/22/2016 12:44:55 AM	A38885
Carbon disulfide	ND	120	2000		µg/L	200	11/22/2016 12:44:55 AM	A38885
Carbon Tetrachloride	ND	22	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Chlorobenzene	ND	23	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Chloroethane	ND	38	400		µg/L	200	11/22/2016 12:44:55 AM	A38885
Chloroform	ND	18	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Chloromethane	ND	43	600		µg/L	200	11/22/2016 12:44:55 AM	A38885
2-Chlorotoluene	ND	80	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
4-Chlorotoluene	ND	26	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
cis-1,2-DCE	ND	25	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
cis-1,3-Dichloropropene	ND	21	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2-Dibromo-3-chloropropane	ND	47	400		µg/L	200	11/22/2016 12:44:55 AM	A38885
Dibromochloromethane	ND	17	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Dibromomethane	ND	24	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2-Dichlorobenzene	ND	80	200		µg/L	200	11/22/2016 12:44:55 AM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-2

Project: 2016 4th Qtr Ground Water

Collection Date: 11/16/2016 12:10:00 PM

Lab ID: 1611976-004

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,3-Dichlorobenzene	ND	29	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,4-Dichlorobenzene	ND	29	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Dichlorodifluoromethane	ND	71	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,1-Dichloroethane	ND	22	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,1-Dichloroethene	ND	21	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2-Dichloropropane	ND	22	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,3-Dichloropropane	ND	31	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
2,2-Dichloropropane	ND	33	400		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,1-Dichloropropene	ND	27	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Hexachlorobutadiene	ND	40	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
2-Hexanone	ND	170	2000		µg/L	200	11/22/2016 12:44:55 AM	A38885
Isopropylbenzene	ND	21	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
4-Isopropyltoluene	ND	28	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
4-Methyl-2-pentanone	ND	86	2000		µg/L	200	11/22/2016 12:44:55 AM	A38885
Methylene Chloride	ND	37	600		µg/L	200	11/22/2016 12:44:55 AM	A38885
n-Butylbenzene	ND	32	600		µg/L	200	11/22/2016 12:44:55 AM	A38885
n-Propylbenzene	63	26	200	J	µg/L	200	11/22/2016 12:44:55 AM	A38885
sec-Butylbenzene	ND	25	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Styrene	ND	22	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
tert-Butylbenzene	ND	23	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,1,1,2-Tetrachloroethane	ND	22	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,1,2,2-Tetrachloroethane	ND	26	400		µg/L	200	11/22/2016 12:44:55 AM	A38885
Tetrachloroethene (PCE)	ND	30	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
trans-1,2-DCE	ND	80	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
trans-1,3-Dichloropropene	ND	21	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2,3-Trichlorobenzene	ND	23	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2,4-Trichlorobenzene	ND	27	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,1,1-Trichloroethane	ND	18	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,1,2-Trichloroethane	ND	25	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Trichloroethene (TCE)	ND	35	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Trichlorofluoromethane	ND	41	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
1,2,3-Trichloropropane	ND	40	400		µg/L	200	11/22/2016 12:44:55 AM	A38885
Vinyl chloride	ND	39	200		µg/L	200	11/22/2016 12:44:55 AM	A38885
Xylenes, Total	3200	73	300		µg/L	200	11/22/2016 12:44:55 AM	A38885
Surr: 1,2-Dichloroethane-d4	99.6	0	70-130		%Rec	200	11/22/2016 12:44:55 AM	A38885
Surr: 4-Bromofluorobenzene	93.0	0	70-130		%Rec	200	11/22/2016 12:44:55 AM	A38885
Surr: Dibromofluoromethane	102	0	70-130		%Rec	200	11/22/2016 12:44:55 AM	A38885
Surr: Toluene-d8	100	0	70-130		%Rec	200	11/22/2016 12:44:55 AM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: East LDU

Project: 2016 4th Qtr Ground Water

Collection Date: 11/17/2016 10:15:00 AM

Lab ID: 1611976-005

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	16	0.69	1.0		mg/L	1	11/21/2016 3:08:03 PM	28752
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/21/2016 3:08:03 PM	28752
Surr: DNOP	103	0	77.1-144		%Rec	1	11/21/2016 3:08:03 PM	28752
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	1.6	0.25	0.50		mg/L	10	11/21/2016 5:24:17 PM	G38887
Surr: BFB	114	0	66.4-120		%Rec	10	11/21/2016 5:24:17 PM	G38887
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.085	0.0013	0.0020		mg/L	1	12/8/2016 2:07:54 PM	A39247
Cadmium	ND	0.00075	0.0020		mg/L	1	12/8/2016 2:07:54 PM	A39247
Chromium	0.44	0.0018	0.0060	*	mg/L	1	12/8/2016 2:07:54 PM	A39247
Copper	ND	0.0040	0.0060		mg/L	1	12/8/2016 2:07:54 PM	A39247
Iron	47	1.0	1.0	*	mg/L	50	12/9/2016 12:26:49 PM	A39280
Manganese	16	0.016	0.10	*	mg/L	50	12/9/2016 12:26:49 PM	A39280
Silver	ND	0.0028	0.0050		mg/L	1	12/9/2016 12:20:56 PM	A39280
Zinc	0.018	0.0028	0.010		mg/L	1	12/8/2016 2:07:54 PM	A39247
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.097	0.00079	0.0020		mg/L	1	12/8/2016 3:47:22 PM	29034
Cadmium	ND	0.0015	0.0020		mg/L	1	12/8/2016 3:47:22 PM	29034
Chromium	0.53	0.0027	0.0060	*	mg/L	1	12/8/2016 3:47:22 PM	29034
Copper	0.0097	0.0030	0.0060		mg/L	1	12/8/2016 3:47:22 PM	29034
Iron	55	2.0	2.0	*	mg/L	100	12/9/2016 11:58:43 AM	29034
Manganese	16	0.014	0.10	*	mg/L	50	12/9/2016 11:56:40 AM	29034
Silver	0.0064	0.0015	0.0050		mg/L	1	12/8/2016 3:47:22 PM	29034
Zinc	0.74	0.0027	0.010		mg/L	1	12/8/2016 3:47:22 PM	29034
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0025	0.00014	0.0010		mg/L	1	11/28/2016 5:50:41 PM	C39007
Lead	ND	0.00017	0.00050		mg/L	1	11/28/2016 5:50:41 PM	C39007
Selenium	0.0022	0.0011	0.0050	J	mg/L	5	11/30/2016 7:00:27 PM	R39071
Uranium	0.00010	0.000051	0.00050	J	mg/L	1	11/28/2016 5:50:41 PM	C39007
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0033	0.00021	0.0010		mg/L	1	12/7/2016 5:48:42 PM	29034
Lead	0.0027	0.00041	0.0025		mg/L	5	12/8/2016 5:17:09 PM	29034
Selenium	0.0023	0.00094	0.0050	J	mg/L	5	12/8/2016 5:17:09 PM	29034
Uranium	ND	0.00087	0.0025		mg/L	5	12/8/2016 5:17:09 PM	29034
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	0.00028	0.000053	0.00020		mg/L	1	12/1/2016 10:37:25 AM	28920

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: East LDU

Project: 2016 4th Qtr Ground Water

Collection Date: 11/17/2016 10:15:00 AM

Lab ID: 1611976-005

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: AG	
Benzene	110	0.48	5.0		µg/L	5	11/22/2016 1:13:36 AM	L38885
Toluene	8.2	0.59	5.0		µg/L	5	11/22/2016 1:13:36 AM	L38885
Ethylbenzene	100	0.56	5.0		µg/L	5	11/22/2016 1:13:36 AM	L38885
Methyl tert-butyl ether (MTBE)	6.3	1.1	5.0		µg/L	5	11/22/2016 1:13:36 AM	L38885
1,2,4-Trimethylbenzene	7.0	0.55	5.0		µg/L	5	11/22/2016 1:13:36 AM	L38885
1,3,5-Trimethylbenzene	39	0.58	5.0		µg/L	5	11/22/2016 1:13:36 AM	L38885
Xylenes, Total	9.8	1.8	7.5		µg/L	5	11/22/2016 1:13:36 AM	L38885
Surr: 1,2-Dichloroethane-d4	99.6	0	70-130		%Rec	5	11/22/2016 1:13:36 AM	L38885
Surr: 4-Bromofluorobenzene	97.8	0	70-130		%Rec	5	11/22/2016 1:13:36 AM	L38885
Surr: Dibromofluoromethane	102	0	70-130		%Rec	5	11/22/2016 1:13:36 AM	L38885
Surr: Toluene-d8	97.3	0	70-130		%Rec	5	11/22/2016 1:13:36 AM	L38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: West LDU

Project: 2016 4th Qtr Ground Water

Collection Date: 11/17/2016 10:30:00 AM

Lab ID: 1611976-006

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	8.6	0.69	1.0		mg/L	1	11/21/2016 3:29:39 PM	28752
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/21/2016 3:29:39 PM	28752
Surr: DNOP	104	0	77.1-144		%Rec	1	11/21/2016 3:29:39 PM	28752
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	2.2	0.13	0.25		mg/L	5	11/21/2016 5:48:42 PM	G38887
Surr: BFB	129	0	66.4-120	S	%Rec	5	11/21/2016 5:48:42 PM	G38887
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.24	0.0013	0.0020		mg/L	1	12/8/2016 1:53:42 PM	A39247
Cadmium	ND	0.00075	0.0020		mg/L	1	12/8/2016 1:53:42 PM	A39247
Chromium	0.67	0.0088	0.030	*	mg/L	5	12/9/2016 12:35:17 PM	A39280
Copper	ND	0.0040	0.0060		mg/L	1	12/8/2016 1:53:42 PM	A39247
Iron	0.17	0.020	0.020		mg/L	1	12/8/2016 1:53:42 PM	A39247
Manganese	0.51	0.00032	0.0020	*	mg/L	1	12/8/2016 1:53:42 PM	A39247
Silver	ND	0.0028	0.0050		mg/L	1	12/9/2016 12:28:53 PM	A39280
Zinc	0.0045	0.0028	0.010	J	mg/L	1	12/8/2016 1:53:42 PM	A39247
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.26	0.00079	0.0020		mg/L	1	12/8/2016 3:49:20 PM	29034
Cadmium	ND	0.0015	0.0020		mg/L	1	12/8/2016 3:49:20 PM	29034
Chromium	0.77	0.0027	0.0060	*	mg/L	1	12/8/2016 3:49:20 PM	29034
Copper	ND	0.0030	0.0060		mg/L	1	12/8/2016 3:49:20 PM	29034
Iron	3.3	0.20	0.20	*	mg/L	10	12/9/2016 12:00:53 PM	29034
Manganese	0.56	0.00027	0.0020	*	mg/L	1	12/8/2016 3:49:20 PM	29034
Silver	ND	0.0015	0.0050		mg/L	1	12/8/2016 3:49:20 PM	29034
Zinc	0.079	0.0027	0.010		mg/L	1	12/8/2016 3:49:20 PM	29034
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0040	0.00014	0.0010		mg/L	1	11/28/2016 5:53:45 PM	C39007
Lead	ND	0.00017	0.00050		mg/L	1	11/28/2016 5:53:45 PM	C39007
Selenium	0.0045	0.00021	0.0010		mg/L	1	11/28/2016 5:53:45 PM	C39007
Uranium	0.00066	0.000051	0.00050		mg/L	1	11/28/2016 5:53:45 PM	C39007
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0040	0.00021	0.0010		mg/L	1	12/7/2016 5:53:51 PM	29034
Lead	0.00083	0.00041	0.0025	J	mg/L	5	12/8/2016 5:22:17 PM	29034
Selenium	0.0029	0.00094	0.0050	J	mg/L	5	12/8/2016 5:22:17 PM	29034
Uranium	ND	0.00087	0.0025		mg/L	5	12/8/2016 5:22:17 PM	29034
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	0.00026	0.000053	0.00020		mg/L	1	12/1/2016 10:39:25 AM	28920

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: West LDU

Project: 2016 4th Qtr Ground Water

Collection Date: 11/17/2016 10:30:00 AM

Lab ID: 1611976-006

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: AG	
Benzene	140	0.96	10		µg/L	10	11/22/2016 2:39:35 AM	L38885
Toluene	15	1.2	10		µg/L	10	11/22/2016 2:39:35 AM	L38885
Ethylbenzene	38	1.1	10		µg/L	10	11/22/2016 2:39:35 AM	L38885
Methyl tert-butyl ether (MTBE)	ND	2.1	10		µg/L	10	11/22/2016 2:39:35 AM	L38885
1,2,4-Trimethylbenzene	9.8	1.1	10	J	µg/L	10	11/22/2016 2:39:35 AM	L38885
1,3,5-Trimethylbenzene	3.4	1.2	10	J	µg/L	10	11/22/2016 2:39:35 AM	L38885
Xylenes, Total	24	3.7	15		µg/L	10	11/22/2016 2:39:35 AM	L38885
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	10	11/22/2016 2:39:35 AM	L38885
Surr: 4-Bromofluorobenzene	90.9	0	70-130		%Rec	10	11/22/2016 2:39:35 AM	L38885
Surr: Dibromofluoromethane	96.0	0	70-130		%Rec	10	11/22/2016 2:39:35 AM	L38885
Surr: Toluene-d8	102	0	70-130		%Rec	10	11/22/2016 2:39:35 AM	L38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: STP1 to EP-2

Project: 2016 4th Qtr Ground Water

Collection Date: 11/17/2016 10:45:00 AM

Lab ID: 1611976-007

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	0.95	0.69	1.0	J	mg/L	1	11/28/2016 9:55:33 PM	28752
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2016 9:55:33 PM	28752
Surr: DNOP	134	0	77.1-144		%Rec	1	11/28/2016 9:55:33 PM	28752
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.25	0.50	D	mg/L	10	11/21/2016 6:13:06 PM	G38887
Surr: BFB	95.5	0	66.4-120	D	%Rec	10	11/21/2016 6:13:06 PM	G38887
SM5210B: BOD							Analyst: SMS	
Biochemical Oxygen Demand	1000	2.0	2.0		mg/L	1	11/23/2016 12:24:00 PM	28754
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.96	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Toluene	ND	1.2	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Ethylbenzene	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Methyl tert-butyl ether (MTBE)	ND	2.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2,4-Trimethylbenzene	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,3,5-Trimethylbenzene	ND	1.2	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2-Dichloroethane (EDC)	ND	1.2	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2-Dibromoethane (EDB)	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Naphthalene	ND	0.93	20	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1-Methylnaphthalene	ND	2.0	40	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
2-Methylnaphthalene	ND	1.6	40	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Acetone	2400	490	1000		µg/L	100	11/22/2016 10:25:09 AM	R38929
Bromobenzene	ND	0.98	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Bromodichloromethane	ND	1.4	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Bromoform	ND	1.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Bromomethane	ND	7.8	30	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
2-Butanone	76	7.4	100	JD	µg/L	10	11/22/2016 3:08:12 AM	A38885
Carbon disulfide	13	6.0	100	JD	µg/L	10	11/22/2016 3:08:12 AM	A38885
Carbon Tetrachloride	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Chlorobenzene	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Chloroethane	ND	1.9	20	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Chloroform	ND	0.89	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Chloromethane	ND	2.1	30	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
2-Chlorotoluene	ND	4.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
4-Chlorotoluene	ND	1.3	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
cis-1,2-DCE	ND	1.2	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
cis-1,3-Dichloropropene	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2-Dibromo-3-chloropropane	ND	2.3	20	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Dibromochloromethane	ND	0.87	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: STP1 to EP-2

Project: 2016 4th Qtr Ground Water

Collection Date: 11/17/2016 10:45:00 AM

Lab ID: 1611976-007

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Dibromomethane	ND	1.2	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2-Dichlorobenzene	ND	4.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,3-Dichlorobenzene	ND	1.4	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,4-Dichlorobenzene	ND	1.4	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Dichlorodifluoromethane	ND	3.6	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,1-Dichloroethane	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,1-Dichloroethene	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2-Dichloropropane	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,3-Dichloropropane	ND	1.6	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
2,2-Dichloropropane	ND	1.7	20	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,1-Dichloropropene	ND	1.3	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Hexachlorobutadiene	ND	2.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
2-Hexanone	ND	8.4	100	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Isopropylbenzene	ND	1.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
4-Isopropyltoluene	ND	1.4	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
4-Methyl-2-pentanone	ND	4.3	100	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Methylene Chloride	ND	1.9	30	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
n-Butylbenzene	ND	1.6	30	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
n-Propylbenzene	ND	1.3	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
sec-Butylbenzene	ND	1.2	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Styrene	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
tert-Butylbenzene	ND	1.2	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,1,1,2-Tetrachloroethane	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,1,2,2-Tetrachloroethane	ND	1.3	20	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
trans-1,2-DCE	ND	4.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
trans-1,3-Dichloropropene	ND	1.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2,3-Trichlorobenzene	ND	1.1	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2,4-Trichlorobenzene	ND	1.3	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,1,1-Trichloroethane	ND	0.91	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,1,2-Trichloroethane	ND	1.3	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Trichloroethene (TCE)	ND	1.8	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Trichlorofluoromethane	ND	2.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
1,2,3-Trichloropropane	ND	2.0	20	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Vinyl chloride	ND	2.0	10	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Xylenes, Total	ND	3.7	15	D	µg/L	10	11/22/2016 3:08:12 AM	A38885
Surr: 1,2-Dichloroethane-d4	103	0	70-130	D	%Rec	10	11/22/2016 3:08:12 AM	A38885
Surr: 4-Bromofluorobenzene	99.5	0	70-130	D	%Rec	10	11/22/2016 3:08:12 AM	A38885
Surr: Dibromofluoromethane	103	0	70-130	D	%Rec	10	11/22/2016 3:08:12 AM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: STP1 to EP-2

Project: 2016 4th Qtr Ground Water

Collection Date: 11/17/2016 10:45:00 AM

Lab ID: 1611976-007

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: Toluene-d8	99.5	0	70-130	D	%Rec	10	11/22/2016 3:08:12 AM	A38885
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS	
Total Dissolved Solids	4810	105	200	*D	mg/L	1	11/22/2016 7:21:00 PM	28797

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 4th Qtr Ground Water

Collection Date:

Lab ID: 1611976-008

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/21/2016 6:37:28 PM	G38887
Surr: BFB	93.4	0	66.4-120		%Rec	1	11/21/2016 6:37:28 PM	G38887
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Toluene	ND	0.12	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Naphthalene	ND	0.093	2.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Acetone	5.7	4.9	10	J	µg/L	1	11/21/2016 8:25:58 PM	A38885
Bromobenzene	ND	0.098	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Bromoform	ND	0.10	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Bromomethane	ND	0.78	3.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
2-Butanone	ND	0.74	10		µg/L	1	11/21/2016 8:25:58 PM	A38885
Carbon disulfide	ND	0.60	10		µg/L	1	11/21/2016 8:25:58 PM	A38885
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Chloroethane	ND	0.19	2.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Chloroform	ND	0.089	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Chloromethane	ND	0.21	3.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Dibromomethane	ND	0.12	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885

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 1611976

Date Reported: 12/14/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 4th Qtr Ground Water

Collection Date:

Lab ID: 1611976-008

Matrix: AQUEOUS

Received Date: 11/17/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
2-Hexanone	ND	0.84	10		µg/L	1	11/21/2016 8:25:58 PM	A38885
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/21/2016 8:25:58 PM	A38885
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Styrene	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/21/2016 8:25:58 PM	A38885
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/21/2016 8:25:58 PM	A38885
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	11/21/2016 8:25:58 PM	A38885
Surr: 4-Bromofluorobenzene	97.6	0	70-130		%Rec	1	11/21/2016 8:25:58 PM	A38885
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	11/21/2016 8:25:58 PM	A38885
Surr: Toluene-d8	102	0	70-130		%Rec	1	11/21/2016 8:25:58 PM	A38885

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

1611976-007E STP1 TO EP-2

SAMPLE RESULTS - 01

OHE LAB. NATIONWIDE



Collected date/time: 11/17/16 19:45

L874528

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
COD	mg/l		mg/l			
	1620		500	50	11/28/2016 14:22	WIC929837

⁹⁹Tc⁸⁵Sr⁴⁴Ca⁸⁷Sr⁸⁶Ca⁶⁷Zn²⁷Al⁴⁵Sc

ACCOUNT:

Hall Environmental Analysis Laboratory

PROJECT:

SDG:

L874528

DATE/TIME:

11/30/16 08:21

QUALITY CONTROL SUMMARY

L874518-01

WG929837

Wet Chemistry by Method 410.4

Method Blank (MB)

(MS) R3180855-1 11/28/16 14:19	
MB Result	MB Qualifier
mg/l	mg/l
0	3.00
MB MDL	MB RDL
mg/l	mg/l
0	10.0
Analyte	
COO	

L874451-01 Original Sample (OS) • Duplicate (DUP)

(CS) L874451-01 11/28/16 14:21 • (DUP) R3180855-4 11/28/16 14:21	
Original Result	DUP Result
mg/l	mg/l
84.5	82.1
DUP RPD	DUP RPD Limits
%	%
3.00	20
Analyte	
COO	

L874724-01 Original Sample (OS) • Duplicate (DUP)

(OS) L874724-01 11/28/16 14:23 • (DUP) R3180855-7 11/28/16 14:23	
Original Result	DUP Result
mg/l	mg/l
32.8	39.3
DUP RPD	DUP RPD Limits
%	%
18.0	20
Analyte	
COO	

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

(LCS) R3180855-2 11/28/16 14:19 • (LCSD) R3180855-3 11/28/16 14:19	
Spike Amount	LCS Result
mg/l	mg/l
242	248
LCS Rec	LCSD Rec
%	%
102	102
Rec Limits	LCSD Rec
%	%
90.0-110	102
LCS Qualifier	LCSD Qualifier
%	%
100	100
RPD	RPD Limits
%	%
0	20
Analyte	
COO	

L874539-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L874539-01 11/28/16 14:22 • (MS) R3180855-5 11/28/16 14:22 • (MSD) R3180855-6 11/28/16 14:22	
Spike Amount	Original Result
mg/l	mg/l
400	33.2
MS Result	MSD Result
mg/l	mg/l
433	423
MS Rec	MSD Rec
%	%
100	97.0
Rec Limits	MSD Rec
%	%
85.0-120	97.0
Dilution	MS Qualifier
1	%
MS Qualifier	MSD Qualifier
%	%
2.00	2.00
RPD	RPD Limits
%	%
20	20
Analyte	
COO	

ACCOUNT:

PROJECT:

SDG:

DATE/TIME:

11/30/16 08:21



GLOSSARY OF TERMS

ONE LAB. NATIONWIDE



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Rec.	Recovery.

Qualifier Description

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



QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID MB-A	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: A39247		RunNo: 39247							
Prep Date:	Analysis Date: 12/8/2016		SeqNo: 1228271		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-A	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: A39247		RunNo: 39247							
Prep Date:	Analysis Date: 12/8/2016		SeqNo: 1228272		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	99.4	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.6	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	97.9	85	115			
Manganese	0.49	0.0020	0.5000	0	97.6	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID LLLCS-A	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: A39247		RunNo: 39247							
Prep Date:	Analysis Date: 12/8/2016		SeqNo: 1228273		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	97.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	100	50	150			
Chromium	0.0067	0.0060	0.006000	0	111	50	150			
Copper	0.0064	0.0060	0.006000	0	108	50	150			
Iron	0.024	0.020	0.02000	0	122	50	150			
Manganese	0.0024	0.0020	0.002000	0	123	50	150			
Zinc	0.0067	0.010	0.005000	0	134	50	150			J

Sample ID 1611976-005CMS	SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: East LDU	Batch ID: A39247		RunNo: 39247							
Prep Date:	Analysis Date: 12/8/2016		SeqNo: 1228490		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.58	0.0020	0.5000	0.08516	98.2	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	1611976-005CMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	East LDU		Batch ID:	A39247		RunNo:	39247			
Prep Date:			Analysis Date:	12/8/2016		SeqNo:	1228490		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	70	130			
Chromium	0.92	0.0060	0.5000	0.4449	95.0	70	130			
Copper	0.54	0.0060	0.5000	0	108	70	130			
Zinc	0.50	0.010	0.5000	0.01779	97.1	70	130			

Sample ID	1611976-005CMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	East LDU		Batch ID:	A39247		RunNo:	39247			
Prep Date:			Analysis Date:	12/8/2016		SeqNo:	1228491		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.56	0.0020	0.5000	0.08516	95.2	70	130	2.68	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0.168	20	
Chromium	0.92	0.0060	0.5000	0.4449	95.4	70	130	0.221	20	
Copper	0.53	0.0060	0.5000	0	106	70	130	1.67	20	
Zinc	0.51	0.010	0.5000	0.01779	98.9	70	130	1.77	20	

Sample ID	1611976-006CMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	West LDU		Batch ID:	A39247		RunNo:	39247			
Prep Date:			Analysis Date:	12/8/2016		SeqNo:	1229084		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.73	0.0020	0.5000	0.2434	97.8	70	130			
Cadmium	0.52	0.0020	0.5000	0	103	70	130			
Copper	0.52	0.0060	0.5000	0	103	70	130			
Iron	0.65	0.020	0.5000	0.1733	96.0	70	130			
Manganese	0.99	0.0020	0.5000	0.5116	95.0	70	130			
Zinc	0.50	0.010	0.5000	0.004470	98.9	70	130			

Sample ID	1611976-006CMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	West LDU		Batch ID:	A39247		RunNo:	39247			
Prep Date:			Analysis Date:	12/8/2016		SeqNo:	1229085		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.72	0.0020	0.5000	0.2434	95.0	70	130	1.94	20	
Cadmium	0.51	0.0020	0.5000	0	101	70	130	2.22	20	
Copper	0.50	0.0060	0.5000	0	100	70	130	3.13	20	
Iron	0.64	0.020	0.5000	0.1733	93.6	70	130	1.85	20	
Manganese	0.97	0.0020	0.5000	0.5116	92.0	70	130	1.53	20	
Zinc	0.49	0.010	0.5000	0.004470	97.0	70	130	1.95	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID MB-A	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: A39280		RunNo: 39280							
Prep Date:	Analysis Date: 12/9/2016		SeqNo: 1229491		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID LCS-A	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: A39280		RunNo: 39280							
Prep Date:	Analysis Date: 12/9/2016		SeqNo: 1229492		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	93.2	85	115			
Iron	0.47	0.020	0.5000	0	93.1	85	115			
Manganese	0.47	0.0020	0.5000	0	93.8	85	115			
Silver	0.097	0.0050	0.1000	0	97.1	85	115			

Sample ID LLLCS-A	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: A39280		RunNo: 39280							
Prep Date:	Analysis Date: 12/9/2016		SeqNo: 1229493		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Iron	0.025	0.020	0.02000	0	126	50	150			
Manganese	0.0020	0.0020	0.002000	0	98.0	50	150			J
Silver	0.0042	0.0050	0.005000	0	85.0	50	150			J

Sample ID 1611976-005CMS	SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: East LDU	Batch ID: A39280		RunNo: 39280							
Prep Date:	Analysis Date: 12/9/2016		SeqNo: 1229496		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.081	0.0050	0.1000	0	81.1	70	130			

Sample ID 1611976-005CMSD	SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: East LDU	Batch ID: A39280		RunNo: 39280							
Prep Date:	Analysis Date: 12/9/2016		SeqNo: 1229497		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.085	0.0050	0.1000	0	85.2	70	130	4.93	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	1611976-006CMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	West LDU		Batch ID: A39280		RunNo: 39280					
Prep Date:			Analysis Date: 12/9/2016		SeqNo: 1229500		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	94.7	70	130			

Sample ID	1611976-006CMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	West LDU		Batch ID: A39280		RunNo: 39280					
Prep Date:			Analysis Date: 12/9/2016		SeqNo: 1229501		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	6.01	20	

Sample ID	1611976-006CMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	West LDU		Batch ID: A39280		RunNo: 39280					
Prep Date:			Analysis Date: 12/9/2016		SeqNo: 1229503		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	3.0	0.030	2.500	0.6744	91.1	70	130			

Sample ID	1611976-006CMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	West LDU		Batch ID: A39280		RunNo: 39280					
Prep Date:			Analysis Date: 12/9/2016		SeqNo: 1229504		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	3.0	0.030	2.500	0.6744	94.4	70	130	2.78	20	

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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	MB-29034		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 29034		RunNo: 39247					
Prep Date:	12/6/2016		Analysis Date: 12/8/2016		SeqNo: 1228707		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	0.00038	0.0020								J
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-29034		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 29034		RunNo: 39247					
Prep Date:	12/6/2016		Analysis Date: 12/8/2016		SeqNo: 1228708		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	101	85	115			
Cadmium	0.53	0.0020	0.5000	0	105	85	115			
Chromium	0.52	0.0060	0.5000	0	103	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Silver	0.097	0.0050	0.1000	0	97.4	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Sample ID	LLLCS-29034		SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 29034		RunNo: 39247					
Prep Date:	12/6/2016		Analysis Date: 12/8/2016		SeqNo: 1228709		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	80.5	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0050	0.0060	0.006000	0	83.2	50	150			J
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0042	0.0050	0.005000	0	84.8	50	150			J
Zinc	0.0059	0.010	0.005000	0	119	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: C39007		RunNo: 39007							
Prep Date:	Analysis Date: 11/28/2016		SeqNo: 1220004		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	98.4	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID LLCS	SampType: LCSLL		TestCode: EPA 200.8: Dissolved Metals							
Client ID: BatchQC	Batch ID: C39007		RunNo: 39007							
Prep Date:	Analysis Date: 11/28/2016		SeqNo: 1220005		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	103	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Selenium	0.0011	0.0010	0.001000	0	106	50	150			
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: C39007		RunNo: 39007							
Prep Date:	Analysis Date: 11/28/2016		SeqNo: 1220009		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: R39071		RunNo: 39071							
Prep Date:	Analysis Date: 11/30/2016		SeqNo: 1222065		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.027	0.0010	0.02500	0	107	85	115			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R39071		RunNo: 39071							
Prep Date:	Analysis Date: 11/30/2016		SeqNo: 1222066		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.027	0.0010	0.02500	0	108	85	115			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| 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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	LLLCS	SampType:	LCSLL	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R39071	RunNo:	39071					
Prep Date:		Analysis Date:	11/30/2016	SeqNo:	1222067	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00097	0.0010	0.001000	0	97.3	50	150			J

Sample ID	LLLCS	SampType:	LCSLL	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R39071	RunNo:	39071					
Prep Date:		Analysis Date:	11/30/2016	SeqNo:	1222068	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0011	0.0010	0.001000	0	105	50	150			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R39071	RunNo:	39071					
Prep Date:		Analysis Date:	11/30/2016	SeqNo:	1222069	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R39071	RunNo:	39071					
Prep Date:		Analysis Date:	11/30/2016	SeqNo:	1222070	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	MB-29034		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	29034		RunNo:	39218			
Prep Date:	12/6/2016		Analysis Date:	12/7/2016		SeqNo:	1227106	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-29034		SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW		Batch ID:	29034		RunNo:	39218			
Prep Date:	12/6/2016		Analysis Date:	12/7/2016		SeqNo:	1227108	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID	MSLLLCS-29034		SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	BatchQC		Batch ID:	29034		RunNo:	39218			
Prep Date:	12/6/2016		Analysis Date:	12/7/2016		SeqNo:	1227110	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	91.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.1	50	150			J
Uranium	0.00037	0.00050	0.0005000	0	74.0	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	MB-28920		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 28920		RunNo: 39070					
Prep Date:	11/30/2016		Analysis Date: 12/1/2016		SeqNo: 1222324		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	0.000084	0.00020								J

Sample ID	LCS-28920		SampType: LCS		TestCode: EPA Method 245.1: Mercury					
Client ID:	LCSW		Batch ID: 28920		RunNo: 39070					
Prep Date:	11/30/2016		Analysis Date: 12/1/2016		SeqNo: 1222325		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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	LCS-28752		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 28752		RunNo: 38852					
Prep Date:	11/18/2016		Analysis Date: 11/21/2016		SeqNo: 1214598		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.6	1.0	5.000	0	92.9	63.2	155			
Surr: DNOP	0.47		0.5000		94.9	77.1	144			

Sample ID	MB-28752		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW		Batch ID: 28752		RunNo: 38852					
Prep Date:	11/18/2016		Analysis Date: 11/21/2016		SeqNo: 1214599		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	1.0		1.000		102	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	G38887	RunNo:	38887					
Prep Date:		Analysis Date:	11/21/2016	SeqNo:	1215345	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	19		20.00		96.0	66.4	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	G38887	RunNo:	38887					
Prep Date:		Analysis Date:	11/21/2016	SeqNo:	1215346	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.7	80	120			
Surr: BFB	20		20.00		99.8	66.4	120			

Sample ID	1611976-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	RW-5	Batch ID:	G38887	RunNo:	38887					
Prep Date:		Analysis Date:	11/21/2016	SeqNo:	1215349	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	9.5	0.50	5.000	7.584	38.6	64.8	129			S
Surr: BFB	240		200.0		118	66.4	120			

Sample ID	1611976-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	RW-5	Batch ID:	G38887	RunNo:	38887					
Prep Date:		Analysis Date:	11/21/2016	SeqNo:	1215350	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	11	0.50	5.000	7.584	58.7	64.8	129	10.0	20	S
Surr: BFB	240		200.0		119	66.4	120	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch ID: L38885		RunNo: 38885							
Prep Date:	Analysis Date: 11/21/2016		SeqNo: 1215242		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.3	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID rb4	SampType: MBLK		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: PBW	Batch ID: L38885		RunNo: 38885							
Prep Date:	Analysis Date: 11/21/2016		SeqNo: 1215245		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								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.4	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID 1611976-005ams	SampType: MS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: East LDU	Batch ID: L38885		RunNo: 38885							
Prep Date:	Analysis Date: 11/22/2016		SeqNo: 1215249		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	200	5.0	100.0	110.4	93.2	70	130			
Toluene	110	5.0	100.0	8.165	101	70	130			
Surr: 1,2-Dichloroethane-d4	50		50.00		101	70	130			
Surr: 4-Bromofluorobenzene	45		50.00		89.3	70	130			
Surr: Dibromofluoromethane	47		50.00		93.7	70	130			
Surr: Toluene-d8	51		50.00		103	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	1611976-005amsd	SampType:	MSD	TestCode:	EPA Method 8260: Volatiles Short List						
Client ID:	East LDU	Batch ID:	L38885	RunNo:	38885						
Prep Date:		Analysis Date:	11/22/2016	SeqNo:	1215250	Units:	µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	200	5.0	100.0	110.4	90.5	70	130	1.34	20		
Toluene	110	5.0	100.0	8.165	101	70	130	0.277	20		
Surr: 1,2-Dichloroethane-d4	52		50.00		104	70	130	0	0		
Surr: 4-Bromofluorobenzene	47		50.00		93.4	70	130	0	0		
Surr: Dibromofluoromethane	48		50.00		96.3	70	130	0	0		
Surr: Toluene-d8	52		50.00		104	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	100ng lcs2		SampType: LCS		TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW		Batch ID: A38885		RunNo: 38885					
Prep Date:			Analysis Date: 11/21/2016		SeqNo: 1215205		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.3	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID	rb4	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: A38885			RunNo: 38885					
Prep Date:		Analysis Date: 11/21/2016			SeqNo: 1215207		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.	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	rb4	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	A38885	RunNo:	38885					
Prep Date:		Analysis Date:	11/21/2016	SeqNo:	1215207	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID rb4	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A38885			RunNo: 38885						
Prep Date:	Analysis Date: 11/21/2016			SeqNo: 1215207		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		101	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.4	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R38929			RunNo: 38929						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1216951		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.3	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R38929			RunNo: 38929						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217007		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Acetone	ND	10								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	MB-28754		SampType: MBLK		TestCode: SM5210B: BOD					
Client ID:	PBW		Batch ID: 28754		RunNo: 39010					
Prep Date:	11/18/2016		Analysis Date: 11/23/2016		SeqNo: 1220164		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxvaen Demand	ND	2.0								

Sample ID	MB--28754		SampType: MBLK		TestCode: SM5210B: BOD					
Client ID:	PBW		Batch ID: 28754		RunNo: 39010					
Prep Date:	11/18/2016		Analysis Date: 11/23/2016		SeqNo: 1220165		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	LCS-28754		SampType: LCS		TestCode: SM5210B: BOD					
Client ID:	LCSW		Batch ID: 28754		RunNo: 39010					
Prep Date:	11/18/2016		Analysis Date: 11/23/2016		SeqNo: 1220166		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	150	2.0	198.0	0	77.5	59.3	123			

Sample ID	LCSD-28754		SampType: LCSD		TestCode: SM5210B: BOD					
Client ID:	LCSS02		Batch ID: 28754		RunNo: 39010					
Prep Date:	11/18/2016		Analysis Date: 11/23/2016		SeqNo: 1220167		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	170	2.0	198.0	0	84.8	59.3	123	9.02	29.9	

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#: 1611976

14-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th Qtr Ground Water

Sample ID	MB-28797		SampType: MBLK		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW		Batch ID: 28797		RunNo: 38928					
Prep Date:	11/21/2016		Analysis Date: 11/22/2016		SeqNo: 1216558		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-28797		SampType: LCS		TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW		Batch ID: 28797		RunNo: 38928					
Prep Date:	11/21/2016		Analysis Date: 11/22/2016		SeqNo: 1216559		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	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



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: 1611976

RcptNo: 1

Received by/date:

AG

11/17/16

Logged By: Ashley Gallegos

11/17/2016 4:23:00 PM

AG

Completed By: Ashley Gallegos

11/17/2016 5:34:32 PM

AG

Reviewed By:

AG/Re

11/18/16 @ 0847

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 # of preserved bottles checked for pH: 5
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No Adjusted? Yes
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 Checked by: *Re*

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, 1 mL HNO₃ was added to 006D. 11/18/16
Held for 24 hrs prior to analysis 0845 Re*

18. Cooler Information

Cooler No	Temp °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
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December 06, 2016

Cheryl Johnson

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

RE: 2016 4th QTR (MKTF)

OrderNo.: 1610E79

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 10/29/2016 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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB102816

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:05:00 AM

Lab ID: 1610E79-001

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 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	11/2/2016 7:00:00 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 7:00:00 PM	28388
Surr: DNOP	120	0	77.1-144		%Rec	1	11/2/2016 7:00:00 PM	28388
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/4/2016 4:02:00 PM	G38456
Surr: BFB	86.7	0	66.4-120		%Rec	1	11/4/2016 4:02:00 PM	G38456
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	ND	0.050	0.10		mg/L	1	11/2/2016 11:34:13 PM	R38416
Chloride	ND	0.051	0.50		mg/L	1	11/8/2016 9:17:12 PM	R38550
Bromide	ND	0.044	0.10		mg/L	1	11/2/2016 11:34:13 PM	R38416
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 9:17:12 PM	R38550
Sulfate	ND	0.14	0.50		mg/L	1	11/2/2016 11:34:13 PM	R38416
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/3/2016 4:07:11 AM	R38416
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	ND	0.0013	0.0020		mg/L	1	11/10/2016 12:39:37 PM	B38611
Cadmium	ND	0.00075	0.0020		mg/L	1	11/10/2016 12:39:37 PM	B38611
Calcium	ND	0.50	1.0		mg/L	1	11/10/2016 12:39:37 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/10/2016 12:39:37 PM	B38611
Copper	ND	0.0040	0.0060		mg/L	1	11/10/2016 12:39:37 PM	B38611
Iron	ND	0.020	0.020		mg/L	1	11/10/2016 12:39:37 PM	B38611
Magnesium	ND	0.50	1.0		mg/L	1	11/10/2016 12:39:37 PM	B38611
Manganese	0.0012	0.00032	0.0020	J	mg/L	1	11/10/2016 12:39:37 PM	B38611
Potassium	ND	0.50	1.0		mg/L	1	11/10/2016 12:39:37 PM	B38611
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:26:17 PM	A38830
Sodium	ND	0.50	1.0		mg/L	1	11/14/2016 1:43:27 PM	B38703
Zinc	ND	0.0028	0.010		mg/L	1	11/10/2016 12:39:37 PM	B38611
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	ND	0.00079	0.0020		mg/L	1	11/23/2016 10:24:13 AM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/18/2016 7:45:01 PM	28635
Chromium	ND	0.0027	0.0060		mg/L	1	11/18/2016 7:45:01 PM	28635
Copper	0.0036	0.0030	0.0060	J	mg/L	1	11/18/2016 7:45:01 PM	28635
Iron	ND	0.020	0.020		mg/L	1	11/18/2016 7:45:01 PM	28635
Manganese	0.00036	0.00027	0.0020	J	mg/L	1	11/18/2016 7:45:01 PM	28635
Silver	ND	0.0015	0.0050		mg/L	1	11/28/2016 6:12:40 PM	28799
Zinc	ND	0.0027	0.010		mg/L	1	11/18/2016 7:45:01 PM	28635
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	ND	0.00014	0.0010		mg/L	1	11/11/2016 7:46:56 PM	D38648

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB102816

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:05:00 AM

Lab ID: 1610E79-001

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	ND	0.00017	0.00050		mg/L	1	11/11/2016 7:46:56 PM	D38648
Selenium	ND	0.00021	0.0010		mg/L	1	11/11/2016 7:46:56 PM	D38648
Uranium	ND	0.000051	0.00050		mg/L	1	11/14/2016 5:23:57 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	ND	0.00021	0.0010		mg/L	1	11/15/2016 1:30:43 PM	28635
Lead	ND	0.000081	0.00050		mg/L	1	11/15/2016 1:30:43 PM	28635
Selenium	ND	0.00019	0.0010		mg/L	1	11/15/2016 1:30:43 PM	28635
Uranium	ND	0.00017	0.00050		mg/L	1	11/15/2016 1:30:43 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:38:57 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Benzoic acid	10	2.6	20	J	µg/L	1	11/3/2016 8:25:26 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Bis(2-ethylhexyl)phthalate	7.1	2.6	10	J	µg/L	1	11/3/2016 8:25:26 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Butyl benzyl phthalate	3.0	2.5	10	J	µg/L	1	11/3/2016 8:25:26 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 8:25:26 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 8:25:26 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Di-n-octyl phthalate	8.2	2.0	10	J	µg/L	1	11/3/2016 8:25:26 PM	28386

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
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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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB102816

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:05:00 AM

Lab ID: 1610E79-001

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 8:25:26 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 8:25:26 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 8:25:26 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 8:25:26 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 8:25:26 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 8:25:26 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 8:25:26 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 8:25:26 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 8:25:26 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 8:25:26 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Naphthalene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 8:25:26 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 8:25:26 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 8:25:26 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Phenol	ND	2.0	10		µg/L	1	11/3/2016 8:25:26 PM	28386

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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB102816

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:05:00 AM

Lab ID: 1610E79-001

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 8:25:26 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 8:25:26 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 8:25:26 PM	28386
Surr: 2-Fluorophenol	55.3	0	15-98.1		%Rec	1	11/3/2016 8:25:26 PM	28386
Surr: Phenol-d5	43.4	0	15-80.7		%Rec	1	11/3/2016 8:25:26 PM	28386
Surr: 2,4,6-Tribromophenol	80.1	0	15-112		%Rec	1	11/3/2016 8:25:26 PM	28386
Surr: Nitrobenzene-d5	79.0	0	27.2-90.7		%Rec	1	11/3/2016 8:25:26 PM	28386
Surr: 2-Fluorobiphenyl	61.7	0	23.3-85.6		%Rec	1	11/3/2016 8:25:26 PM	28386
Surr: 4-Terphenyl-d14	63.8	0	27.6-107		%Rec	1	11/3/2016 8:25:26 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Acetone	ND	4.9	10		µg/L	1	11/7/2016 3:22:46 PM	W38511
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 3:22:46 PM	W38511
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 3:22:46 PM	W38511
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB102816

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:05:00 AM

Lab ID: 1610E79-001

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 3:22:46 PM	W38511
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 3:22:46 PM	W38511
Methylene Chloride	0.26	0.19	3.0	J	µg/L	1	11/7/2016 3:22:46 PM	W38511
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 3:22:46 PM	W38511
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 3:22:46 PM	W38511
Surr: 1,2-Dichloroethane-d4	93.0	0	70-130		%Rec	1	11/7/2016 3:22:46 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB102816

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:05:00 AM

Lab ID: 1610E79-001

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 4-Bromofluorobenzene	96.3	0	70-130		%Rec	1	11/7/2016 3:22:46 PM	W38511
Surr: Dibromofluoromethane	94.4	0	70-130		%Rec	1	11/7/2016 3:22:46 PM	W38511
Surr: Toluene-d8	94.5	0	70-130		%Rec	1	11/7/2016 3:22:46 PM	W38511

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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.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:40:00 AM

Lab ID: 1610E79-002

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 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	11/2/2016 7:21:34 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 7:21:34 PM	28388
Surr: DNOP	110	0	77.1-144		%Rec	1	11/2/2016 7:21:34 PM	28388
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/4/2016 4:26:22 PM	G38456
Surr: BFB	85.9	0	66.4-120		%Rec	1	11/4/2016 4:26:22 PM	G38456
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	1.1	0.050	0.10		mg/L	1	11/3/2016 12:23:51 AM	R38416
Chloride	80	1.0	10		mg/L	20	11/8/2016 9:42:02 PM	R38550
Bromide	0.36	0.044	0.10		mg/L	1	11/3/2016 12:23:51 AM	R38416
Phosphorus, Orthophosphate (As P)	0.16	0.076	0.50	JH	mg/L	1	11/8/2016 9:29:37 PM	R38550
Sulfate	560	2.8	10		mg/L	20	11/3/2016 12:36:16 AM	R38416
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/3/2016 4:19:36 AM	R38416
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.027	0.0013	0.0020		mg/L	1	11/10/2016 12:43:17 PM	B38611
Cadmium	ND	0.00075	0.0020		mg/L	1	11/10/2016 12:43:17 PM	B38611
Calcium	63	0.50	1.0		mg/L	1	11/10/2016 12:43:17 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/10/2016 12:43:17 PM	B38611
Copper	ND	0.0040	0.0060		mg/L	1	11/10/2016 12:43:17 PM	B38611
Iron	ND	0.020	0.020		mg/L	1	11/10/2016 12:43:17 PM	B38611
Magnesium	8.7	0.50	1.0		mg/L	1	11/10/2016 12:43:17 PM	B38611
Manganese	0.39	0.00032	0.0020	*	mg/L	1	11/10/2016 12:43:17 PM	B38611
Potassium	ND	0.50	1.0		mg/L	1	11/10/2016 12:43:17 PM	B38611
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:39:47 PM	A38830
Sodium	510	5.0	10		mg/L	10	11/14/2016 1:47:09 PM	B38703
Zinc	0.013	0.0028	0.010		mg/L	1	11/14/2016 1:45:14 PM	B38703
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.10	0.00079	0.0020		mg/L	1	11/23/2016 10:28:07 AM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 1:23:23 PM	28635
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 1:23:23 PM	28635
Copper	0.0039	0.0030	0.0060	J	mg/L	1	11/19/2016 1:23:23 PM	28635
Iron	1.6	0.10	0.10	*	mg/L	5	11/28/2016 6:25:15 PM	28799
Manganese	0.47	0.00027	0.0020	*	mg/L	1	11/19/2016 1:23:23 PM	28635
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 1:23:23 PM	28635
Zinc	0.0050	0.0027	0.010	J	mg/L	1	11/19/2016 1:23:23 PM	28635
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0016	0.00014	0.0010		mg/L	1	11/11/2016 7:50:00 PM	D38648

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

Analytical Report

Lab Order 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:40:00 AM

Lab ID: 1610E79-002

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	ND	0.00017	0.00050		mg/L	1	11/11/2016 7:50:00 PM	D38648
Selenium	0.0026	0.0011	0.0050	J	mg/L	5	11/15/2016 3:57:26 PM	A38728
Uranium	0.013	0.000051	0.00050		mg/L	1	11/14/2016 5:29:06 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0018	0.00021	0.0010		mg/L	1	11/15/2016 1:33:44 PM	28635
Lead	0.0020	0.000081	0.00050		mg/L	1	11/15/2016 1:33:44 PM	28635
Selenium	0.0020	0.00094	0.0050	J	mg/L	5	11/15/2016 2:19:23 PM	28635
Uranium	0.013	0.00017	0.00050		mg/L	1	11/15/2016 1:33:44 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:40:54 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Benzoic acid	15	2.6	20	J	µg/L	1	11/3/2016 8:53:09 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Bis(2-ethylhexyl)phthalate	7.0	2.6	10	J	µg/L	1	11/3/2016 8:53:09 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 8:53:09 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 8:53:09 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Di-n-octyl phthalate	6.8	2.0	10	J	µg/L	1	11/3/2016 8:53:09 PM	28386

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:40:00 AM

Lab ID: 1610E79-002

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 8:53:09 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 8:53:09 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 8:53:09 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 8:53:09 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 8:53:09 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 8:53:09 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 8:53:09 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 8:53:09 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 8:53:09 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 8:53:09 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Naphthalene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 8:53:09 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 8:53:09 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 8:53:09 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Phenol	ND	2.0	10		µg/L	1	11/3/2016 8:53:09 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:40:00 AM

Lab ID: 1610E79-002

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 8:53:09 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 8:53:09 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 8:53:09 PM	28386
Surr: 2-Fluorophenol	38.1	0	15-98.1		%Rec	1	11/3/2016 8:53:09 PM	28386
Surr: Phenol-d5	31.3	0	15-80.7		%Rec	1	11/3/2016 8:53:09 PM	28386
Surr: 2,4,6-Tribromophenol	81.2	0	15-112		%Rec	1	11/3/2016 8:53:09 PM	28386
Surr: Nitrobenzene-d5	62.7	0	27.2-90.7		%Rec	1	11/3/2016 8:53:09 PM	28386
Surr: 2-Fluorobiphenyl	57.8	0	23.3-85.6		%Rec	1	11/3/2016 8:53:09 PM	28386
Surr: 4-Terphenyl-d14	71.2	0	27.6-107		%Rec	1	11/3/2016 8:53:09 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Methyl tert-butyl ether (MTBE)	5.0	0.21	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Acetone	ND	4.9	10		µg/L	1	11/7/2016 3:51:33 PM	W38511
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 3:51:33 PM	W38511
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 3:51:33 PM	W38511
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:40:00 AM

Lab ID: 1610E79-002

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 3:51:33 PM	W38511
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 3:51:33 PM	W38511
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 3:51:33 PM	W38511
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 3:51:33 PM	W38511
Surr: 1,2-Dichloroethane-d4	96.6	0	70-130		%Rec	1	11/7/2016 3:51:33 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-29

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 11:40:00 AM

Lab ID: 1610E79-002

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 4-Bromofluorobenzene	92.5	0	70-130		%Rec	1	11/7/2016 3:51:33 PM	W38511
Surr: Dibromofluoromethane	96.1	0	70-130		%Rec	1	11/7/2016 3:51:33 PM	W38511
Surr: Toluene-d8	93.7	0	70-130		%Rec	1	11/7/2016 3:51:33 PM	W38511

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
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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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 12:55:00 PM

Lab ID: 1610E79-003

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 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	11/2/2016 7:43:23 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 7:43:23 PM	28388
Surr: DNOP	113	0	77.1-144		%Rec	1	11/2/2016 7:43:23 PM	28388
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	0.034	0.025	0.050	J	mg/L	1	11/4/2016 4:50:39 PM	G38456
Surr: BFB	87.1	0	66.4-120		%Rec	1	11/4/2016 4:50:39 PM	G38456
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	0.94	0.050	0.10		mg/L	1	11/3/2016 1:13:29 AM	R38416
Chloride	2200	10	100		mg/L	200	11/8/2016 10:06:51 PM	R38550
Bromide	0.76	0.044	0.10		mg/L	1	11/3/2016 1:13:29 AM	R38416
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 9:54:26 PM	R38550
Sulfate	410	2.8	10		mg/L	20	11/3/2016 1:25:53 AM	R38416
Nitrate+Nitrite as N	1.4	0.92	2.0	J	mg/L	10	11/11/2016 11:34:35 AM	R38643
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.065	0.0013	0.0020		mg/L	1	11/10/2016 12:54:32 PM	B38611
Cadmium	ND	0.00075	0.0020		mg/L	1	11/10/2016 12:54:32 PM	B38611
Calcium	170	2.5	5.0		mg/L	5	11/10/2016 12:56:30 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/10/2016 12:54:32 PM	B38611
Copper	ND	0.0040	0.0060		mg/L	1	11/10/2016 12:54:32 PM	B38611
Iron	0.039	0.020	0.020		mg/L	1	11/10/2016 12:54:32 PM	B38611
Magnesium	27	0.50	1.0		mg/L	1	11/10/2016 12:54:32 PM	B38611
Manganese	0.085	0.00032	0.0020	*	mg/L	1	11/10/2016 12:54:32 PM	B38611
Potassium	11	0.50	1.0		mg/L	1	11/10/2016 12:54:32 PM	B38611
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:41:11 PM	A38830
Sodium	1900	25	50		mg/L	50	11/14/2016 1:51:07 PM	B38703
Zinc	ND	0.0028	0.010		mg/L	1	11/10/2016 12:54:32 PM	B38611
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.089	0.00079	0.0020		mg/L	1	11/23/2016 10:29:20 AM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 1:25:04 PM	28635
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 1:25:04 PM	28635
Copper	ND	0.0030	0.0060		mg/L	1	11/19/2016 1:25:04 PM	28635
Iron	1.5	0.10	0.10	*	mg/L	5	11/28/2016 6:27:12 PM	28799
Manganese	0.24	0.00027	0.0020	*	mg/L	1	11/19/2016 1:25:04 PM	28635
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 1:25:04 PM	28635
Zinc	0.0095	0.0027	0.010	J	mg/L	1	11/19/2016 1:25:04 PM	28635
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0033	0.00069	0.0050	J	mg/L	5	11/15/2016 4:00:29 PM	A38728

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

Analytical Report

Lab Order 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 12:55:00 PM

Lab ID: 1610E79-003

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	ND	0.00084	0.0025		mg/L	5	11/14/2016 5:39:22 PM	B38697
Selenium	0.0095	0.0021	0.010	J	mg/L	10	11/15/2016 4:03:33 PM	A38728
Uranium	0.059	0.00026	0.0025	*	mg/L	5	11/14/2016 5:39:22 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0028	0.0011	0.0050	J	mg/L	5	11/15/2016 2:22:23 PM	28635
Lead	0.0022	0.00041	0.0025	J	mg/L	5	11/15/2016 2:22:23 PM	28635
Selenium	0.0088	0.00094	0.0050		mg/L	5	11/15/2016 2:22:23 PM	28635
Uranium	0.063	0.00087	0.0025	*	mg/L	5	11/15/2016 2:22:23 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:42:53 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Benzoic acid	8.4	2.6	20	J	µg/L	1	11/3/2016 9:20:50 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Bis(2-ethylhexyl)phthalate	6.9	2.6	10	J	µg/L	1	11/3/2016 9:20:50 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/3/2016 9:20:50 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 9:20:50 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 9:20:50 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Di-n-octyl phthalate	6.7	2.0	10	J	µg/L	1	11/3/2016 9:20:50 PM	28386

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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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 12:55:00 PM

Lab ID: 1610E79-003

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 9:20:50 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 9:20:50 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 9:20:50 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 9:20:50 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 9:20:50 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 9:20:50 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 9:20:50 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 9:20:50 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 9:20:50 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 9:20:50 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Naphthalene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 9:20:50 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 9:20:50 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 9:20:50 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Phenol	ND	2.0	10		µg/L	1	11/3/2016 9:20:50 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 12:55:00 PM

Lab ID: 1610E79-003

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 9:20:50 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 9:20:50 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 9:20:50 PM	28386
Surr: 2-Fluorophenol	17.6	0	15-98.1		%Rec	1	11/3/2016 9:20:50 PM	28386
Surr: Phenol-d5	16.8	0	15-80.7		%Rec	1	11/3/2016 9:20:50 PM	28386
Surr: 2,4,6-Tribromophenol	32.0	0	15-112		%Rec	1	11/3/2016 9:20:50 PM	28386
Surr: Nitrobenzene-d5	47.4	0	27.2-90.7		%Rec	1	11/3/2016 9:20:50 PM	28386
Surr: 2-Fluorobiphenyl	38.1	0	23.3-85.6		%Rec	1	11/3/2016 9:20:50 PM	28386
Surr: 4-Terphenyl-d14	29.1	0	27.6-107		%Rec	1	11/3/2016 9:20:50 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Methyl tert-butyl ether (MTBE)	21	0.21	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2-Dichloroethane (EDC)	0.57	0.12	1.0	J	µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Acetone	ND	4.9	10		µg/L	1	11/7/2016 4:20:06 PM	W38511
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 4:20:06 PM	W38511
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 4:20:06 PM	W38511
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
cis-1,2-DCE	0.19	0.12	1.0	J	µg/L	1	11/7/2016 4:20:06 PM	W38511
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 12:55:00 PM

Lab ID: 1610E79-003

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,1-Dichloroethane	1.8	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,1-Dichloroethene	0.39	0.11	1.0	J	µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2-Dichloropropane	0.24	0.11	1.0	J	µg/L	1	11/7/2016 4:20:06 PM	W38511
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 4:20:06 PM	W38511
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 4:20:06 PM	W38511
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 4:20:06 PM	W38511
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 4:20:06 PM	W38511
Surr: 1,2-Dichloroethane-d4	95.3	0	70-130		%Rec	1	11/7/2016 4:20:06 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-27

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 12:55:00 PM

Lab ID: 1610E79-003

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 4-Bromofluorobenzene	93.7	0	70-130		%Rec	1	11/7/2016 4:20:06 PM	W38511
Surr: Dibromofluoromethane	94.7	0	70-130		%Rec	1	11/7/2016 4:20:06 PM	W38511
Surr: Toluene-d8	95.2	0	70-130		%Rec	1	11/7/2016 4:20:06 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-28

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 2:15:00 PM

Lab ID: 1610E79-004

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 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	11/2/2016 8:05:05 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 8:05:05 PM	28388
Surr: DNOP	117	0	77.1-144		%Rec	1	11/2/2016 8:05:05 PM	28388
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/4/2016 5:14:56 PM	G38456
Surr: BFB	85.6	0	66.4-120		%Rec	1	11/4/2016 5:14:56 PM	G38456
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	1.3	0.050	0.10		mg/L	1	11/3/2016 1:38:17 AM	R38416
Chloride	370	2.5	25		mg/L	50	11/8/2016 10:31:39 PM	R38550
Bromide	2.2	0.044	0.10		mg/L	1	11/3/2016 1:38:17 AM	R38416
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 10:19:15 PM	R38550
Sulfate	130	2.8	10		mg/L	20	11/3/2016 1:50:42 AM	R38416
Nitrate+Nitrite as N	1.1	0.46	1.0		mg/L	5	11/3/2016 4:44:26 AM	R38416
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.061	0.0013	0.0020		mg/L	1	11/10/2016 12:58:35 PM	B38611
Cadmium	ND	0.00075	0.0020		mg/L	1	11/10/2016 12:58:35 PM	B38611
Calcium	39	0.50	1.0		mg/L	1	11/10/2016 12:58:35 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/10/2016 12:58:35 PM	B38611
Copper	ND	0.0040	0.0060		mg/L	1	11/10/2016 12:58:35 PM	B38611
Iron	0.049	0.020	0.020		mg/L	1	11/10/2016 12:58:35 PM	B38611
Magnesium	7.3	0.50	1.0		mg/L	1	11/10/2016 12:58:35 PM	B38611
Manganese	0.021	0.00032	0.0020		mg/L	1	11/10/2016 12:58:35 PM	B38611
Potassium	2.5	0.50	1.0		mg/L	1	11/10/2016 12:58:35 PM	B38611
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:42:36 PM	B38830
Sodium	570	5.0	10		mg/L	10	11/14/2016 1:54:47 PM	B38703
Zinc	ND	0.0028	0.010		mg/L	1	11/10/2016 12:58:35 PM	B38611
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.13	0.00079	0.0020		mg/L	1	11/23/2016 10:30:33 AM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 1:27:03 PM	28635
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 1:27:03 PM	28635
Copper	0.0031	0.0030	0.0060	J	mg/L	1	11/19/2016 1:27:03 PM	28635
Iron	3.3	0.10	0.10	*	mg/L	5	11/28/2016 6:29:23 PM	28799
Manganese	0.18	0.00027	0.0020	*	mg/L	1	11/19/2016 1:27:03 PM	28635
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 1:27:03 PM	28635
Zinc	0.015	0.0027	0.010		mg/L	1	11/19/2016 1:27:03 PM	28635
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0047	0.00069	0.0050	J	mg/L	5	11/15/2016 4:06:36 PM	A38728

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-28

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 2:15:00 PM

Lab ID: 1610E79-004

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	0.00022	0.00017	0.00050	J	mg/L	1	11/11/2016 7:56:06 PM	D38648
Selenium	0.012	0.0042	0.020	J	mg/L	20	11/15/2016 4:09:39 PM	A38728
Uranium	0.16	0.00051	0.0050	*	mg/L	10	11/14/2016 6:05:07 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0044	0.0042	0.020	J	mg/L	20	11/15/2016 2:31:24 PM	28635
Lead	0.0056	0.000081	0.00050		mg/L	1	11/15/2016 1:45:50 PM	28635
Selenium	0.013	0.0037	0.020	J	mg/L	20	11/15/2016 2:31:24 PM	28635
Uranium	0.15	0.0035	0.010	*	mg/L	20	11/15/2016 2:31:24 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:51:06 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Benzoic acid	13	2.6	20	J	µg/L	1	11/3/2016 9:48:28 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Bis(2-ethylhexyl)phthalate	9.0	2.6	10	J	µg/L	1	11/3/2016 9:48:28 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/3/2016 9:48:28 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 9:48:28 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 9:48:28 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Di-n-octyl phthalate	6.8	2.0	10	J	µg/L	1	11/3/2016 9:48:28 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-28

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 2:15:00 PM

Lab ID: 1610E79-004

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 9:48:28 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 9:48:28 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 9:48:28 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 9:48:28 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 9:48:28 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 9:48:28 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 9:48:28 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 9:48:28 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 9:48:28 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 9:48:28 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Naphthalene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 9:48:28 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 9:48:28 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 9:48:28 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Phenol	ND	2.0	10		µg/L	1	11/3/2016 9:48:28 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-28

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 2:15:00 PM

Lab ID: 1610E79-004

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 9:48:28 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 9:48:28 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 9:48:28 PM	28386
Surr: 2-Fluorophenol	21.4	0	15-98.1		%Rec	1	11/3/2016 9:48:28 PM	28386
Surr: Phenol-d5	19.4	0	15-80.7		%Rec	1	11/3/2016 9:48:28 PM	28386
Surr: 2,4,6-Tribromophenol	32.7	0	15-112		%Rec	1	11/3/2016 9:48:28 PM	28386
Surr: Nitrobenzene-d5	56.8	0	27.2-90.7		%Rec	1	11/3/2016 9:48:28 PM	28386
Surr: 2-Fluorobiphenyl	42.6	0	23.3-85.6		%Rec	1	11/3/2016 9:48:28 PM	28386
Surr: 4-Terphenyl-d14	29.8	0	27.6-107		%Rec	1	11/3/2016 9:48:28 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Methyl tert-butyl ether (MTBE)	5.2	0.21	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Acetone	ND	4.9	10		µg/L	1	11/7/2016 4:48:45 PM	W38511
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 4:48:45 PM	W38511
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 4:48:45 PM	W38511
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-28

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 2:15:00 PM

Lab ID: 1610E79-004

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 4:48:45 PM	W38511
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 4:48:45 PM	W38511
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 4:48:45 PM	W38511
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 4:48:45 PM	W38511
Surr: 1,2-Dichloroethane-d4	97.0	0	70-130		%Rec	1	11/7/2016 4:48:45 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-28

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 2:15:00 PM

Lab ID: 1610E79-004

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 4-Bromofluorobenzene	93.9	0	70-130		%Rec	1	11/7/2016 4:48:45 PM	W38511
Surr: Dibromofluoromethane	97.2	0	70-130		%Rec	1	11/7/2016 4:48:45 PM	W38511
Surr: Toluene-d8	96.1	0	70-130		%Rec	1	11/7/2016 4:48:45 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:00:00 PM

Lab ID: 1610E79-005

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

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	11/2/2016 7:36:24 PM	28411
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	1.1	0.69	1.0		mg/L	1	11/2/2016 8:26:54 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 8:26:54 PM	28388
Surr: DNOP	114	0	77.1-144		%Rec	1	11/2/2016 8:26:54 PM	28388
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	30	1.3	2.5		mg/L	50	11/8/2016 9:50:24 AM	G38456
Surr: BFB	100	0	66.4-120		%Rec	50	11/8/2016 9:50:24 AM	G38456
EPA METHOD 300.0: ANIONS								
							Analyst: MRA	
Fluoride	0.078	0.050	0.10	J	mg/L	1	11/3/2016 2:03:07 AM	R38416
Chloride	440	2.5	25		mg/L	50	11/8/2016 11:21:18 PM	R38550
Bromide	0.36	0.044	0.10		mg/L	1	11/3/2016 2:03:07 AM	R38416
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 10:44:04 PM	R38550
Sulfate	46	0.14	0.50		mg/L	1	11/3/2016 2:03:07 AM	R38416
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/3/2016 4:56:51 AM	R38416
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.23	0.0013	0.0020		mg/L	1	11/10/2016 1:02:30 PM	B38611
Cadmium	ND	0.00075	0.0020		mg/L	1	11/10/2016 1:02:30 PM	B38611
Calcium	110	2.5	5.0		mg/L	5	11/10/2016 1:04:29 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/10/2016 1:02:30 PM	B38611
Copper	ND	0.0040	0.0060		mg/L	1	11/10/2016 1:02:30 PM	B38611
Iron	0.069	0.020	0.020		mg/L	1	11/10/2016 1:02:30 PM	B38611
Magnesium	19	0.50	1.0		mg/L	1	11/10/2016 1:02:30 PM	B38611
Manganese	2.0	0.0016	0.010	*	mg/L	5	11/10/2016 1:04:29 PM	B38611
Potassium	2.4	0.50	1.0		mg/L	1	11/10/2016 1:02:30 PM	B38611
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:43:59 PM	B38830
Sodium	520	5.0	10		mg/L	10	11/14/2016 2:04:15 PM	B38703
Zinc	ND	0.0028	0.010		mg/L	1	11/14/2016 2:02:20 PM	B38703
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.28	0.00079	0.0020		mg/L	1	11/23/2016 10:31:46 AM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 1:34:53 PM	28635
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 1:34:53 PM	28635
Copper	ND	0.0030	0.0060		mg/L	1	11/19/2016 1:34:53 PM	28635
Iron	1.3	0.10	0.10	*	mg/L	5	11/28/2016 6:31:28 PM	28799
Manganese	1.8	0.0014	0.010	*	mg/L	5	11/28/2016 6:31:28 PM	28799
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 1:34:53 PM	28635
Zinc	0.0065	0.0027	0.010	J	mg/L	1	11/19/2016 1:34:53 PM	28635

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

Analytical Report

Lab Order 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:00:00 PM

Lab ID: 1610E79-005

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0033	0.00014	0.0010		mg/L	1	11/11/2016 7:59:09 PM	D38648
Lead	0.0012	0.00017	0.00050		mg/L	1	11/11/2016 7:59:09 PM	D38648
Selenium	0.0064	0.00021	0.0010		mg/L	1	11/11/2016 7:59:09 PM	D38648
Uranium	0.017	0.000051	0.00050		mg/L	1	11/14/2016 6:10:15 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0025	0.0021	0.010	J	mg/L	10	11/15/2016 2:34:25 PM	28635
Lead	0.0043	0.000081	0.00050		mg/L	1	11/15/2016 1:48:51 PM	28635
Selenium	0.0055	0.0019	0.010	J	mg/L	10	11/15/2016 2:34:25 PM	28635
Uranium	0.020	0.00017	0.00050		mg/L	1	11/15/2016 1:48:51 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:53:06 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Benzoic acid	13	2.6	20	J	µg/L	1	11/3/2016 10:16:06 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Bis(2-ethylhexyl)phthalate	6.6	2.6	10	J	µg/L	1	11/3/2016 10:16:06 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/3/2016 10:16:06 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 10:16:06 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 10:16:06 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:00:00 PM

Lab ID: 1610E79-005

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	6.9	2.0	10	J	µg/L	1	11/3/2016 10:16:06 PM	28386
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 10:16:06 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 10:16:06 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 10:16:06 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 10:16:06 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 10:16:06 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 10:16:06 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 10:16:06 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
1-Methylnaphthalene	7.3	2.9	10	J	µg/L	1	11/3/2016 10:16:06 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 10:16:06 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 10:16:06 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 10:16:06 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Naphthalene	5.5	2.6	10	J	µg/L	1	11/3/2016 10:16:06 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 10:16:06 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 10:16:06 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 10:16:06 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386

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	D	Sample Diluted Due to Matrix	E	Value above quantitation range
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:00:00 PM

Lab ID: 1610E79-005

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	2.0	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 10:16:06 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 10:16:06 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 10:16:06 PM	28386
Surr: 2-Fluorophenol	24.2	0	15-98.1		%Rec	1	11/3/2016 10:16:06 PM	28386
Surr: Phenol-d5	21.0	0	15-80.7		%Rec	1	11/3/2016 10:16:06 PM	28386
Surr: 2,4,6-Tribromophenol	42.6	0	15-112		%Rec	1	11/3/2016 10:16:06 PM	28386
Surr: Nitrobenzene-d5	61.4	0	27.2-90.7		%Rec	1	11/3/2016 10:16:06 PM	28386
Surr: 2-Fluorobiphenyl	48.6	0	23.3-85.6		%Rec	1	11/3/2016 10:16:06 PM	28386
Surr: 4-Terphenyl-d14	34.7	0	27.6-107		%Rec	1	11/3/2016 10:16:06 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	6100	19	200		µg/L	200	11/7/2016 5:17:18 PM	W38511
Toluene	25	2.4	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Ethylbenzene	300	2.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Methyl tert-butyl ether (MTBE)	230	4.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2,4-Trimethylbenzene	10	2.2	20	J	µg/L	20	11/7/2016 5:45:50 PM	W38511
1,3,5-Trimethylbenzene	ND	2.3	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2-Dichloroethane (EDC)	7.9	2.3	20	J	µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2-Dibromoethane (EDB)	ND	2.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Naphthalene	ND	1.9	40		µg/L	20	11/7/2016 5:45:50 PM	W38511
1-Methylnaphthalene	5.2	4.1	80	J	µg/L	20	11/7/2016 5:45:50 PM	W38511
2-Methylnaphthalene	ND	3.2	80		µg/L	20	11/7/2016 5:45:50 PM	W38511
Acetone	ND	98	200		µg/L	20	11/7/2016 5:45:50 PM	W38511
Bromobenzene	ND	2.0	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Bromodichloromethane	ND	2.8	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Bromoform	ND	2.0	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Bromomethane	ND	16	60		µg/L	20	11/7/2016 5:45:50 PM	W38511
2-Butanone	ND	15	200		µg/L	20	11/7/2016 5:45:50 PM	W38511
Carbon disulfide	ND	12	200		µg/L	20	11/7/2016 5:45:50 PM	W38511
Carbon Tetrachloride	ND	2.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Chlorobenzene	ND	2.3	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Chloroethane	ND	3.8	40		µg/L	20	11/7/2016 5:45:50 PM	W38511
Chloroform	ND	1.8	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Chloromethane	ND	4.3	60		µg/L	20	11/7/2016 5:45:50 PM	W38511
2-Chlorotoluene	ND	8.0	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
4-Chlorotoluene	ND	2.6	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
cis-1,2-DCE	35	2.5	20		µg/L	20	11/7/2016 5:45:50 PM	W38511

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
cis-1,3-Dichloropropene	ND	2.1	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2-Dibromo-3-chloropropane	ND	4.7	40		µg/L	20	11/7/2016 5:45:50 PM	W38511
Dibromochloromethane	ND	1.7	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Dibromomethane	ND	2.4	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2-Dichlorobenzene	ND	8.0	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,3-Dichlorobenzene	ND	2.9	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,4-Dichlorobenzene	ND	2.9	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Dichlorodifluoromethane	ND	7.1	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,1-Dichloroethane	88	2.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,1-Dichloroethene	45	2.1	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2-Dichloropropane	ND	2.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,3-Dichloropropane	ND	3.1	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
2,2-Dichloropropane	ND	3.3	40		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,1-Dichloropropene	ND	2.7	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Hexachlorobutadiene	ND	4.0	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
2-Hexanone	ND	17	200		µg/L	20	11/7/2016 5:45:50 PM	W38511
Isopropylbenzene	39	2.1	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
4-Isopropyltoluene	ND	2.8	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
4-Methyl-2-pentanone	ND	8.6	200		µg/L	20	11/7/2016 5:45:50 PM	W38511
Methylene Chloride	ND	3.7	60		µg/L	20	11/7/2016 5:45:50 PM	W38511
n-Butylbenzene	17	3.2	60	J	µg/L	20	11/7/2016 5:45:50 PM	W38511
n-Propylbenzene	93	2.6	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
sec-Butylbenzene	12	2.5	20	J	µg/L	20	11/7/2016 5:45:50 PM	W38511
Styrene	ND	2.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
tert-Butylbenzene	ND	2.3	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,1,1,2-Tetrachloroethane	ND	2.2	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,1,2,2-Tetrachloroethane	ND	2.6	40		µg/L	20	11/7/2016 5:45:50 PM	W38511
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
trans-1,2-DCE	ND	8.0	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
trans-1,3-Dichloropropene	ND	2.1	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2,4-Trichlorobenzene	ND	2.7	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,1,1-Trichloroethane	ND	1.8	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,1,2-Trichloroethane	ND	2.5	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Trichloroethene (TCE)	ND	3.5	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Trichlorofluoromethane	ND	4.1	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
1,2,3-Trichloropropane	ND	4.0	40		µg/L	20	11/7/2016 5:45:50 PM	W38511
Vinyl chloride	ND	3.9	20		µg/L	20	11/7/2016 5:45:50 PM	W38511
Xylenes, Total	15	7.3	30	J	µg/L	20	11/7/2016 5:45:50 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-24

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:00:00 PM

Lab ID: 1610E79-005

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 1,2-Dichloroethane-d4	86.1	0	70-130		%Rec	20	11/7/2016 5:45:50 PM	W38511
Surr: 4-Bromofluorobenzene	95.0	0	70-130		%Rec	20	11/7/2016 5:45:50 PM	W38511
Surr: Dibromofluoromethane	87.5	0	70-130		%Rec	20	11/7/2016 5:45:50 PM	W38511
Surr: Toluene-d8	95.6	0	70-130		%Rec	20	11/7/2016 5:45:50 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:30:00 PM

Lab ID: 1610E79-006

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
							Analyst: JME	
1,2-Dibromoethane	0.044	0.0033	0.010		µg/L	1	11/2/2016 7:51:29 PM	28411
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	1.4	0.69	1.0		mg/L	1	11/2/2016 8:48:29 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 8:48:29 PM	28388
Surr: DNOP	114	0	77.1-144		%Rec	1	11/2/2016 8:48:29 PM	28388
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	6.1	0.25	0.50		mg/L	10	11/4/2016 8:29:55 PM	G38456
Surr: BFB	90.9	0	66.4-120		%Rec	10	11/4/2016 8:29:55 PM	G38456
EPA METHOD 300.0: ANIONS								
							Analyst: MRA	
Fluoride	2.7	0.050	0.10		mg/L	1	11/3/2016 2:27:56 AM	R38416
Chloride	380	2.5	25		mg/L	50	11/8/2016 11:46:08 PM	R38550
Bromide	0.32	0.044	0.10		mg/L	1	11/3/2016 2:27:56 AM	R38416
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 11:33:43 PM	R38550
Sulfate	40	0.14	0.50		mg/L	1	11/3/2016 2:27:56 AM	R38416
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/3/2016 5:09:16 AM	R38416
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.19	0.0013	0.0020		mg/L	1	11/10/2016 1:06:26 PM	B38611
Cadmium	ND	0.00075	0.0020		mg/L	1	11/10/2016 1:06:26 PM	B38611
Calcium	67	0.50	1.0		mg/L	1	11/10/2016 1:06:26 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/10/2016 1:06:26 PM	B38611
Copper	ND	0.0040	0.0060		mg/L	1	11/10/2016 1:06:26 PM	B38611
Iron	0.036	0.020	0.020		mg/L	1	11/10/2016 1:06:26 PM	B38611
Magnesium	11	0.50	1.0		mg/L	1	11/10/2016 1:06:26 PM	B38611
Manganese	0.47	0.00032	0.0020	*	mg/L	1	11/10/2016 1:06:26 PM	B38611
Potassium	2.7	0.50	1.0		mg/L	1	11/10/2016 1:06:26 PM	B38611
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:45:22 PM	B38830
Sodium	620	5.0	10		mg/L	10	11/14/2016 2:08:07 PM	B38703
Zinc	ND	0.0028	0.010		mg/L	1	11/14/2016 2:06:11 PM	B38703
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.22	0.00079	0.0020		mg/L	1	11/28/2016 6:33:28 PM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 1:40:13 PM	28635
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 1:40:13 PM	28635
Copper	ND	0.0030	0.0060		mg/L	1	11/19/2016 1:40:13 PM	28635
Iron	1.5	0.10	0.10	*	mg/L	5	11/28/2016 6:43:51 PM	28799
Manganese	0.53	0.00027	0.0020	*	mg/L	1	11/19/2016 1:40:13 PM	28635
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 1:40:13 PM	28635
Zinc	0.038	0.0027	0.010		mg/L	1	11/19/2016 1:40:13 PM	28635

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:30:00 PM

Lab ID: 1610E79-006

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0030	0.00014	0.0010		mg/L	1	11/11/2016 8:02:13 PM	D38648
Lead	0.00059	0.00017	0.00050		mg/L	1	11/11/2016 8:02:13 PM	D38648
Selenium	0.0064	0.00021	0.0010		mg/L	1	11/11/2016 8:02:13 PM	D38648
Uranium	0.024	0.00026	0.0025		mg/L	5	11/14/2016 6:15:23 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0030	0.00021	0.0010		mg/L	1	11/15/2016 1:51:51 PM	28635
Lead	0.0027	0.000081	0.00050		mg/L	1	11/15/2016 1:51:51 PM	28635
Selenium	0.0048	0.00094	0.0050	J	mg/L	5	11/15/2016 2:37:25 PM	28635
Uranium	0.026	0.00087	0.0025		mg/L	5	11/15/2016 2:37:25 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:55:05 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Benzoic acid	ND	2.6	20		µg/L	1	11/3/2016 10:43:42 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Bis(2-ethylhexyl)phthalate	7.1	2.6	10	J	µg/L	1	11/3/2016 10:43:42 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/3/2016 10:43:42 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 10:43:42 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 10:43:42 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:30:00 PM

Lab ID: 1610E79-006

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	6.8	2.0	10	J	µg/L	1	11/3/2016 10:43:42 PM	28386
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 10:43:42 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 10:43:42 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 10:43:42 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 10:43:42 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 10:43:42 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 10:43:42 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 10:43:42 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
1-Methylnaphthalene	6.0	2.9	10	J	µg/L	1	11/3/2016 10:43:42 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 10:43:42 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 10:43:42 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 10:43:42 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Naphthalene	4.6	2.6	10	J	µg/L	1	11/3/2016 10:43:42 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 10:43:42 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 10:43:42 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 10:43:42 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:30:00 PM

Lab ID: 1610E79-006

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	2.0	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 10:43:42 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 10:43:42 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 10:43:42 PM	28386
Surr: 2-Fluorophenol	22.6	0	15-98.1		%Rec	1	11/3/2016 10:43:42 PM	28386
Surr: Phenol-d5	19.9	0	15-80.7		%Rec	1	11/3/2016 10:43:42 PM	28386
Surr: 2,4,6-Tribromophenol	33.7	0	15-112		%Rec	1	11/3/2016 10:43:42 PM	28386
Surr: Nitrobenzene-d5	52.9	0	27.2-90.7		%Rec	1	11/3/2016 10:43:42 PM	28386
Surr: 2-Fluorobiphenyl	39.6	0	23.3-85.6		%Rec	1	11/3/2016 10:43:42 PM	28386
Surr: 4-Terphenyl-d14	26.1	0	27.6-107	S	%Rec	1	11/3/2016 10:43:42 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	1600	9.6	100		µg/L	100	11/7/2016 6:43:39 PM	W38511
Toluene	20	1.2	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Ethylbenzene	95	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Methyl tert-butyl ether (MTBE)	150	2.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2,4-Trimethylbenzene	20	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,3,5-Trimethylbenzene	ND	1.2	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2-Dichloroethane (EDC)	7.2	1.2	10	J	µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2-Dibromoethane (EDB)	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Naphthalene	1.6	0.93	20	J	µg/L	10	11/7/2016 6:43:12 PM	W38511
1-Methylnaphthalene	4.5	2.0	40	J	µg/L	10	11/7/2016 6:43:12 PM	W38511
2-Methylnaphthalene	ND	1.6	40		µg/L	10	11/7/2016 6:43:12 PM	W38511
Acetone	ND	49	100		µg/L	10	11/7/2016 6:43:12 PM	W38511
Bromobenzene	ND	0.98	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Bromodichloromethane	ND	1.4	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Bromoform	ND	1.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Bromomethane	ND	7.8	30		µg/L	10	11/7/2016 6:43:12 PM	W38511
2-Butanone	ND	7.4	100		µg/L	10	11/7/2016 6:43:12 PM	W38511
Carbon disulfide	ND	6.0	100		µg/L	10	11/7/2016 6:43:12 PM	W38511
Carbon Tetrachloride	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Chlorobenzene	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Chloroethane	ND	1.9	20		µg/L	10	11/7/2016 6:43:12 PM	W38511
Chloroform	ND	0.89	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Chloromethane	ND	2.1	30		µg/L	10	11/7/2016 6:43:12 PM	W38511
2-Chlorotoluene	ND	4.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
4-Chlorotoluene	ND	1.3	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
cis-1,2-DCE	17	1.2	10		µg/L	10	11/7/2016 6:43:12 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:30:00 PM

Lab ID: 1610E79-006

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
cis-1,3-Dichloropropene	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2-Dibromo-3-chloropropane	ND	2.3	20		µg/L	10	11/7/2016 6:43:12 PM	W38511
Dibromochloromethane	ND	0.87	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Dibromomethane	ND	1.2	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2-Dichlorobenzene	ND	4.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,3-Dichlorobenzene	ND	1.4	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,4-Dichlorobenzene	ND	1.4	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Dichlorodifluoromethane	ND	3.6	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,1-Dichloroethane	62	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,1-Dichloroethene	37	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2-Dichloropropane	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,3-Dichloropropane	ND	1.6	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
2,2-Dichloropropane	ND	1.7	20		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,1-Dichloropropene	ND	1.3	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Hexachlorobutadiene	ND	2.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
2-Hexanone	ND	8.4	100		µg/L	10	11/7/2016 6:43:12 PM	W38511
Isopropylbenzene	6.2	1.0	10	J	µg/L	10	11/7/2016 6:43:12 PM	W38511
4-Isopropyltoluene	ND	1.4	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
4-Methyl-2-pentanone	ND	4.3	100		µg/L	10	11/7/2016 6:43:12 PM	W38511
Methylene Chloride	ND	1.9	30		µg/L	10	11/7/2016 6:43:12 PM	W38511
n-Butylbenzene	ND	1.6	30		µg/L	10	11/7/2016 6:43:12 PM	W38511
n-Propylbenzene	12	1.3	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
sec-Butylbenzene	1.8	1.2	10	J	µg/L	10	11/7/2016 6:43:12 PM	W38511
Styrene	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
tert-Butylbenzene	ND	1.2	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,1,1,2-Tetrachloroethane	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,1,2,2-Tetrachloroethane	ND	1.3	20		µg/L	10	11/7/2016 6:43:12 PM	W38511
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
trans-1,2-DCE	ND	4.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
trans-1,3-Dichloropropene	ND	1.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2,3-Trichlorobenzene	ND	1.1	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2,4-Trichlorobenzene	ND	1.3	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,1,1-Trichloroethane	1.0	0.91	10	J	µg/L	10	11/7/2016 6:43:12 PM	W38511
1,1,2-Trichloroethane	ND	1.3	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Trichloroethene (TCE)	2.9	1.8	10	J	µg/L	10	11/7/2016 6:43:12 PM	W38511
Trichlorofluoromethane	ND	2.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
1,2,3-Trichloropropane	ND	2.0	20		µg/L	10	11/7/2016 6:43:12 PM	W38511
Vinyl chloride	ND	2.0	10		µg/L	10	11/7/2016 6:43:12 PM	W38511
Xylenes, Total	9.9	3.7	15	J	µg/L	10	11/7/2016 6:43:12 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-02

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 3:30:00 PM

Lab ID: 1610E79-006

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 1,2-Dichloroethane-d4	96.6	0	70-130		%Rec	10	11/7/2016 6:43:12 PM	W38511
Surr: 4-Bromofluorobenzene	93.6	0	70-130		%Rec	10	11/7/2016 6:43:12 PM	W38511
Surr: Dibromofluoromethane	94.9	0	70-130		%Rec	10	11/7/2016 6:43:12 PM	W38511
Surr: Toluene-d8	96.0	0	70-130		%Rec	10	11/7/2016 6:43:12 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKFT-30

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 4:30:00 PM

Lab ID: 1610E79-007

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

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	11/2/2016 8:06:38 PM	28411
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	11/2/2016 9:10:19 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 9:10:19 PM	28388
Surr: DNOP	114	0	77.1-144		%Rec	1	11/2/2016 9:10:19 PM	28388
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	0.14	0.025	0.050		mg/L	1	11/4/2016 9:18:37 PM	G38456
Surr: BFB	89.2	0	66.4-120		%Rec	1	11/4/2016 9:18:37 PM	G38456
EPA METHOD 300.0: ANIONS								
							Analyst: MRA	
Fluoride	1.1	0.050	0.10		mg/L	1	11/3/2016 2:52:45 AM	R38416
Chloride	810	5.1	50		mg/L	100	11/9/2016 12:10:57 AM	R38550
Bromide	1.1	0.044	0.10		mg/L	1	11/3/2016 2:52:45 AM	R38416
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 11:58:33 PM	R38550
Sulfate	400	2.8	10		mg/L	20	11/3/2016 3:05:09 AM	R38416
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/3/2016 5:21:41 AM	R38416
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.046	0.0013	0.0020		mg/L	1	11/14/2016 2:10:01 PM	B38703
Cadmium	ND	0.00075	0.0020		mg/L	1	11/14/2016 2:10:01 PM	B38703
Calcium	93	2.5	5.0		mg/L	5	11/10/2016 1:10:25 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/14/2016 2:10:01 PM	B38703
Copper	ND	0.0040	0.0060		mg/L	1	11/14/2016 2:10:01 PM	B38703
Iron	ND	0.020	0.020		mg/L	1	11/14/2016 2:10:01 PM	B38703
Magnesium	18	0.50	1.0		mg/L	1	11/14/2016 2:10:01 PM	B38703
Manganese	0.0031	0.00032	0.0020		mg/L	1	11/14/2016 2:10:01 PM	B38703
Potassium	ND	0.50	1.0		mg/L	1	11/14/2016 2:10:01 PM	B38703
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:46:47 PM	B38830
Sodium	910	10	20		mg/L	20	11/18/2016 5:19:32 PM	B38830
Zinc	ND	0.0028	0.010		mg/L	1	11/14/2016 2:10:01 PM	B38703
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.16	0.00079	0.0020		mg/L	1	11/28/2016 6:45:57 PM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 1:41:57 PM	28635
Chromium	0.0031	0.0027	0.0060	J	mg/L	1	11/19/2016 1:41:57 PM	28635
Copper	ND	0.0030	0.0060		mg/L	1	11/19/2016 1:41:57 PM	28635
Iron	3.0	0.10	0.10	*	mg/L	5	11/28/2016 6:47:49 PM	28799
Manganese	0.32	0.00027	0.0020	*	mg/L	1	11/19/2016 1:41:57 PM	28635
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 1:41:57 PM	28635
Zinc	0.0088	0.0027	0.010	J	mg/L	1	11/19/2016 1:41:57 PM	28635

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKFT-30

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 4:30:00 PM

Lab ID: 1610E79-007

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0027	0.00069	0.0050	J	mg/L	5	11/15/2016 4:18:53 PM	A38728
Lead	ND	0.00017	0.00050		mg/L	1	11/11/2016 8:05:16 PM	D38648
Selenium	0.0077	0.00021	0.0010		mg/L	1	11/11/2016 8:05:16 PM	D38648
Uranium	0.029	0.00026	0.0025		mg/L	5	11/14/2016 6:20:31 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0022	0.0011	0.0050	J	mg/L	5	11/15/2016 2:49:30 PM	28635
Lead	0.0045	0.000081	0.00050		mg/L	1	11/15/2016 1:54:51 PM	28635
Selenium	0.0065	0.0019	0.010	J	mg/L	10	11/15/2016 2:52:30 PM	28635
Uranium	0.030	0.00087	0.0025		mg/L	5	11/15/2016 2:49:30 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:57:05 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Benzoic acid	8.6	2.6	20	J	µg/L	1	11/3/2016 11:11:19 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Bis(2-ethylhexyl)phthalate	6.9	2.6	10	J	µg/L	1	11/3/2016 11:11:19 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/3/2016 11:11:19 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 11:11:19 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 11:11:19 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKFT-30

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 4:30:00 PM

Lab ID: 1610E79-007

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	6.9	2.0	10	J	µg/L	1	11/3/2016 11:11:19 PM	28386
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 11:11:19 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 11:11:19 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 11:11:19 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 11:11:19 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 11:11:19 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 11:11:19 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 11:11:19 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 11:11:19 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 11:11:19 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 11:11:19 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Naphthalene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 11:11:19 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 11:11:19 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 11:11:19 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKFT-30

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 4:30:00 PM

Lab ID: 1610E79-007

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	2.0	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 11:11:19 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 11:11:19 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 11:11:19 PM	28386
Surr: 2-Fluorophenol	21.5	0	15-98.1		%Rec	1	11/3/2016 11:11:19 PM	28386
Surr: Phenol-d5	19.4	0	15-80.7		%Rec	1	11/3/2016 11:11:19 PM	28386
Surr: 2,4,6-Tribromophenol	33.4	0	15-112		%Rec	1	11/3/2016 11:11:19 PM	28386
Surr: Nitrobenzene-d5	58.6	0	27.2-90.7		%Rec	1	11/3/2016 11:11:19 PM	28386
Surr: 2-Fluorobiphenyl	45.1	0	23.3-85.6		%Rec	1	11/3/2016 11:11:19 PM	28386
Surr: 4-Terphenyl-d14	30.8	0	27.6-107		%Rec	1	11/3/2016 11:11:19 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Methyl tert-butyl ether (MTBE)	2.0	0.21	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2-Dichloroethane (EDC)	5.2	0.12	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Acetone	ND	4.9	10		µg/L	1	11/7/2016 7:40:16 PM	W38511
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 7:40:16 PM	W38511
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 7:40:16 PM	W38511
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Chloroform	0.20	0.089	1.0	J	µg/L	1	11/7/2016 7:40:16 PM	W38511
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
cis-1,2-DCE	10	0.12	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKFT-30

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 4:30:00 PM

Lab ID: 1610E79-007

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,1-Dichloroethane	110	1.1	10		µg/L	10	11/7/2016 7:11:47 PM	W38511
1,1-Dichloroethene	7.9	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 7:40:16 PM	W38511
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 7:40:16 PM	W38511
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Tetrachloroethene (PCE)	0.47	0.15	1.0	J	µg/L	1	11/7/2016 7:40:16 PM	W38511
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,1,1-Trichloroethane	2.6	0.091	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,1,2-Trichloroethane	0.91	0.13	1.0	J	µg/L	1	11/7/2016 7:40:16 PM	W38511
Trichloroethene (TCE)	6.9	0.18	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 7:40:16 PM	W38511
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 7:40:16 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKFT-30

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016 4:30:00 PM

Lab ID: 1610E79-007

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 1,2-Dichloroethane-d4	99.0	0	70-130		%Rec	1	11/7/2016 7:40:16 PM	W38511
Surr: 4-Bromofluorobenzene	94.8	0	70-130		%Rec	1	11/7/2016 7:40:16 PM	W38511
Surr: Dibromofluoromethane	93.8	0	70-130		%Rec	1	11/7/2016 7:40:16 PM	W38511
Surr: Toluene-d8	95.6	0	70-130		%Rec	1	11/7/2016 7:40:16 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016

Lab ID: 1610E79-008

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 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	11/2/2016 9:32:00 PM	28388
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/2/2016 9:32:00 PM	28388
Surr: DNOP	116	0	77.1-144		%Rec	1	11/2/2016 9:32:00 PM	28388
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/4/2016 9:43:05 PM	G38456
Surr: BFB	83.5	0	66.4-120		%Rec	1	11/4/2016 9:43:05 PM	G38456
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	1.1	0.050	0.10		mg/L	1	11/3/2016 3:42:22 AM	R38416
Chloride	68	1.0	10		mg/L	20	11/9/2016 12:35:46 AM	R38550
Bromide	0.35	0.044	0.10		mg/L	1	11/3/2016 3:42:22 AM	R38416
Phosphorus, Orthophosphate (As P)	0.15	0.076	0.50	JH	mg/L	1	11/9/2016 12:23:22 AM	R38550
Sulfate	550	2.8	10		mg/L	20	11/3/2016 3:54:47 AM	R38416
Nitrate+Nitrite as N	ND	0.092	0.20	H	mg/L	1	11/3/2016 3:42:22 AM	R38416
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.028	0.0013	0.0020		mg/L	1	11/10/2016 1:19:47 PM	B38611
Cadmium	ND	0.00075	0.0020		mg/L	1	11/10/2016 1:19:47 PM	B38611
Calcium	62	0.50	1.0		mg/L	1	11/10/2016 1:19:47 PM	B38611
Chromium	ND	0.0018	0.0060		mg/L	1	11/10/2016 1:19:47 PM	B38611
Copper	ND	0.0040	0.0060		mg/L	1	11/10/2016 1:19:47 PM	B38611
Iron	ND	0.020	0.020		mg/L	1	11/10/2016 1:19:47 PM	B38611
Magnesium	8.6	0.50	1.0		mg/L	1	11/10/2016 1:19:47 PM	B38611
Manganese	0.39	0.00032	0.0020	*	mg/L	1	11/10/2016 1:19:47 PM	B38611
Potassium	0.51	0.50	1.0	J	mg/L	1	11/10/2016 1:19:47 PM	B38611
Silver	ND	0.0028	0.0050		mg/L	1	11/18/2016 4:48:13 PM	B38830
Sodium	510	5.0	10		mg/L	10	11/14/2016 2:13:52 PM	B38703
Zinc	0.0036	0.0028	0.010	J	mg/L	1	11/14/2016 2:11:56 PM	B38703
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.11	0.00079	0.0020		mg/L	1	11/28/2016 6:49:55 PM	28799
Cadmium	ND	0.0015	0.0020		mg/L	1	11/18/2016 7:51:25 PM	28635
Chromium	ND	0.0027	0.0060		mg/L	1	11/18/2016 7:51:25 PM	28635
Copper	0.0072	0.0030	0.0060		mg/L	1	11/18/2016 7:51:25 PM	28635
Iron	1.6	0.10	0.10	*	mg/L	5	11/18/2016 7:52:48 PM	28635
Manganese	0.44	0.00027	0.0020	*	mg/L	1	11/18/2016 7:51:25 PM	28635
Silver	ND	0.0015	0.0050		mg/L	1	11/18/2016 7:51:25 PM	28635
Zinc	0.0040	0.0027	0.010	J	mg/L	1	11/18/2016 7:51:25 PM	28635
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0017	0.00014	0.0010		mg/L	1	11/11/2016 8:08:19 PM	D38648

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016

Lab ID: 1610E79-008

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	ND	0.00017	0.00050		mg/L	1	11/11/2016 8:08:19 PM	D38648
Selenium	0.0023	0.00021	0.0010		mg/L	1	11/11/2016 8:08:19 PM	D38648
Uranium	0.013	0.000051	0.00050		mg/L	1	11/14/2016 6:25:40 PM	B38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0018	0.00021	0.0010		mg/L	1	11/15/2016 1:57:52 PM	28635
Lead	0.0019	0.000081	0.00050		mg/L	1	11/15/2016 1:57:52 PM	28635
Selenium	0.0017	0.00094	0.0050	J	mg/L	5	11/15/2016 2:55:31 PM	28635
Uranium	0.014	0.00017	0.00050		mg/L	1	11/15/2016 1:57:52 PM	28635
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 4:59:05 PM	28644
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Acenaphthylene	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Aniline	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Anthracene	ND	2.5	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Azobenzene	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Benzoic acid	8.9	2.6	20	J	µg/L	1	11/3/2016 11:38:57 PM	28386
Benzyl alcohol	ND	3.0	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Bis(2-ethylhexyl)phthalate	6.9	2.6	10	J	µg/L	1	11/3/2016 11:38:57 PM	28386
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/3/2016 11:38:57 PM	28386
Carbazole	ND	2.3	10		µg/L	1	11/3/2016 11:38:57 PM	28386
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
4-Chloroaniline	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2-Chlorophenol	ND	2.2	10		µg/L	1	11/3/2016 11:38:57 PM	28386
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Chrysene	ND	2.8	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Di-n-octyl phthalate	6.9	2.0	10	J	µg/L	1	11/3/2016 11:38:57 PM	28386

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016

Lab ID: 1610E79-008

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Dibenzofuran	ND	2.5	10		µg/L	1	11/3/2016 11:38:57 PM	28386
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 11:38:57 PM	28386
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/3/2016 11:38:57 PM	28386
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Diethyl phthalate	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/3/2016 11:38:57 PM	28386
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/3/2016 11:38:57 PM	28386
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/3/2016 11:38:57 PM	28386
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/3/2016 11:38:57 PM	28386
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Fluoranthene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Fluorene	ND	2.7	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Hexachloroethane	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Isophorone	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2-Methylphenol	ND	2.5	10		µg/L	1	11/3/2016 11:38:57 PM	28386
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/3/2016 11:38:57 PM	28386
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/3/2016 11:38:57 PM	28386
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Naphthalene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2-Nitroaniline	ND	2.8	10		µg/L	1	11/3/2016 11:38:57 PM	28386
3-Nitroaniline	ND	2.9	10		µg/L	1	11/3/2016 11:38:57 PM	28386
4-Nitroaniline	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Nitrobenzene	ND	2.8	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2-Nitrophenol	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
4-Nitrophenol	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Pentachlorophenol	ND	2.3	20		µg/L	1	11/3/2016 11:38:57 PM	28386
Phenanthrene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Phenol	ND	2.0	10		µg/L	1	11/3/2016 11:38:57 PM	28386

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016

Lab ID: 1610E79-008

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Pyridine	ND	2.2	10		µg/L	1	11/3/2016 11:38:57 PM	28386
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/3/2016 11:38:57 PM	28386
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/3/2016 11:38:57 PM	28386
Surr: 2-Fluorophenol	19.4	0	15-98.1		%Rec	1	11/3/2016 11:38:57 PM	28386
Surr: Phenol-d5	17.5	0	15-80.7		%Rec	1	11/3/2016 11:38:57 PM	28386
Surr: 2,4,6-Tribromophenol	34.1	0	15-112		%Rec	1	11/3/2016 11:38:57 PM	28386
Surr: Nitrobenzene-d5	51.9	0	27.2-90.7		%Rec	1	11/3/2016 11:38:57 PM	28386
Surr: 2-Fluorobiphenyl	36.2	0	23.3-85.6		%Rec	1	11/3/2016 11:38:57 PM	28386
Surr: 4-Terphenyl-d14	29.7	0	27.6-107		%Rec	1	11/3/2016 11:38:57 PM	28386
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Methyl tert-butyl ether (MTBE)	5.0	0.21	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Acetone	ND	4.9	10		µg/L	1	11/7/2016 2:25:20 PM	W38511
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 2:25:20 PM	W38511
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 2:25:20 PM	W38511
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016

Lab ID: 1610E79-008

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 2:25:20 PM	W38511
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 2:25:20 PM	W38511
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 2:25:20 PM	W38511
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 2:25:20 PM	W38511
Surr: 1,2-Dichloroethane-d4	95.7	0	70-130		%Rec	1	11/7/2016 2:25:20 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP01

Project: 2016 4th QTR (MKTF)

Collection Date: 10/28/2016

Lab ID: 1610E79-008

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Surr: 4-Bromofluorobenzene	95.6	0	70-130		%Rec	1	11/7/2016 2:25:20 PM	W38511
Surr: Dibromofluoromethane	92.8	0	70-130		%Rec	1	11/7/2016 2:25:20 PM	W38511
Surr: Toluene-d8	93.3	0	70-130		%Rec	1	11/7/2016 2:25:20 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 2016 4th QTR (MKTF)

Collection Date:

Lab ID: 1610E79-009

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/4/2016 10:07:27 PM	G38456
Surr: BFB	86.2	0	66.4-120		%Rec	1	11/4/2016 10:07:27 PM	G38456
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Acetone	ND	4.9	10		µg/L	1	11/7/2016 2:54:07 PM	W38511
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 2:54:07 PM	W38511
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 2:54:07 PM	W38511
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511

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 1610E79

Date Reported: 12/6/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 2016 4th QTR (MKTF)

Collection Date:

Lab ID: 1610E79-009

Matrix: AQUEOUS

Received Date: 10/29/2016 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: DJF	
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 2:54:07 PM	W38511
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 2:54:07 PM	W38511
Methylene Chloride	0.29	0.19	3.0	J	µg/L	1	11/7/2016 2:54:07 PM	W38511
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 2:54:07 PM	W38511
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 2:54:07 PM	W38511
Surr: 1,2-Dichloroethane-d4	97.8	0	70-130		%Rec	1	11/7/2016 2:54:07 PM	W38511
Surr: 4-Bromofluorobenzene	95.0	0	70-130		%Rec	1	11/7/2016 2:54:07 PM	W38511
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	1	11/7/2016 2:54:07 PM	W38511
Surr: Toluene-d8	94.4	0	70-130		%Rec	1	11/7/2016 2:54:07 PM	W38511

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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-B		SampType:	MBLK		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	PBW		Batch ID:	B38611		RunNo:	38611			
Prep Date:			Analysis Date:	11/10/2016		SeqNo:	1206917	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								
Zinc	ND	0.010								

Sample ID	LCS-B		SampType:	LCS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	LCSW		Batch ID:	B38611		RunNo:	38611			
Prep Date:			Analysis Date:	11/10/2016		SeqNo:	1206918	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	101	85	115			
Calcium	51	1.0	50.00	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.3	85	115			
Iron	0.49	0.020	0.5000	0	99.0	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Potassium	49	1.0	50.00	0	98.6	85	115			
Zinc	0.52	0.010	0.5000	0	103	85	115			

Sample ID	LLCS-B		SampType:	LCSLL		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	B38611		RunNo:	38611			
Prep Date:			Analysis Date:	11/10/2016		SeqNo:	1206919	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	90.5	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Calcium	0.53	1.0	0.5000	0	106	50	150			J
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0075	0.0060	0.006000	0	125	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0024	0.0020	0.002000	0	120	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID LLLCS-B	SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: BatchQC	Batch ID: B38611			RunNo: 38611						
Prep Date:	Analysis Date: 11/10/2016			SeqNo: 1206919		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	0.65	1.0	0.5000	0	130	50	150			J
Zinc	0.0057	0.010	0.005000	0	114	50	150			J

Sample ID MB-B	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: PBW	Batch ID: B38703			RunNo: 38703						
Prep Date:	Analysis Date: 11/14/2016			SeqNo: 1209001		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								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
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: B38703			RunNo: 38703						
Prep Date:	Analysis Date: 11/14/2016			SeqNo: 1209002		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	0.53	0.0020	0.5000	0	105	85	115			
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Magnesium	52	1.0	50.00	0	103	85	115			
Manganese	0.48	0.0020	0.5000	0	97.0	85	115			
Potassium	51	1.0	50.00	0	101	85	115			
Sodium	52	1.0	50.00	0	103	85	115			
Zinc	0.50	0.010	0.5000	0	99.7	85	115			

Sample ID LLLCS-B	SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: BatchQC	Batch ID: B38703			RunNo: 38703						
Prep Date:	Analysis Date: 11/14/2016			SeqNo: 1209014		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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID LLLCS-B	SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: BatchQC	Batch ID: B38703			RunNo: 38703						
Prep Date:	Analysis Date: 11/14/2016			SeqNo: 1209014		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	80.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	94.5	50	150			J
Chromium	0.0060	0.0060	0.006000	0	101	50	150			
Copper	0.0074	0.0060	0.006000	0	124	50	150			
Iron	0.019	0.020	0.02000	0	96.2	50	150			J
Magnesium	0.55	1.0	0.5000	0	111	50	150			J
Manganese	0.0019	0.0020	0.002000	0	95.5	50	150			J
Potassium	0.69	1.0	0.5000	0	138	50	150			J
Sodium	0.58	1.0	0.5000	0	116	50	150			J
Zinc	0.0042	0.010	0.005000	0	83.0	50	150			J

Sample ID MB-A	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: PBW	Batch ID: A38830			RunNo: 38830						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1213320		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID LLLCS-A	SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: BatchQC	Batch ID: A38830			RunNo: 38830						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1213321		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0050	0.0050	0.005000	0	99.8	50	150			J

Sample ID LCS-A	SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: LCSW	Batch ID: A38830			RunNo: 38830						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1213322		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	97.6	85	115			

Sample ID MB-B	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: PBW	Batch ID: B38830			RunNo: 38830						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1213348		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								
Sodium	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	LLLCS-B		SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: B38830		RunNo: 38830					
Prep Date:			Analysis Date: 11/18/2016		SeqNo: 1213349		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0049	0.0050	0.005000	0	98.6	50	150			J
Sodium	0.64	1.0	0.5000	0	127	50	150			J

Sample ID	LCS-B		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: B38830		RunNo: 38830					
Prep Date:			Analysis Date: 11/18/2016		SeqNo: 1213350		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	96.0	85	115			
Sodium	52	1.0	50.00	0	104	85	115			

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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28635		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	28635		RunNo:	38830			
Prep Date:	11/14/2016		Analysis Date:	11/18/2016		SeqNo:	1213431		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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-28635		SampType:	LCSLL		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	28635		RunNo:	38830			
Prep Date:	11/14/2016		Analysis Date:	11/18/2016		SeqNo:	1213432		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0017	0.0020	0.002000	0	87.0	50	150			J
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0059	0.0060	0.006000	0	99.0	50	150			J
Iron	0.027	0.020	0.02000	0	133	50	150			
Manganese	0.0029	0.0020	0.002000	0	144	50	150			
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Zinc	0.0067	0.010	0.005000	0	134	50	150			J

Sample ID	LCS-28635		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	28635		RunNo:	38830			
Prep Date:	11/14/2016		Analysis Date:	11/18/2016		SeqNo:	1213433		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	99.3	85	115			
Chromium	0.49	0.0060	0.5000	0	98.3	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Manganese	0.48	0.0020	0.5000	0	96.3	85	115			
Silver	0.099	0.0050	0.1000	0	98.8	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Sample ID	1610E79-001EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	FB102816		Batch ID:	28635		RunNo:	38830			
Prep Date:	11/14/2016		Analysis Date:	11/18/2016		SeqNo:	1213476		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.47	0.0020	0.5000	0	94.2	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	1610E79-001EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	FB102816		Batch ID:	28635		RunNo:	38830			
Prep Date:	11/14/2016		Analysis Date:	11/18/2016		SeqNo:	1213476		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	94.5	70	130			
Copper	0.51	0.0060	0.5000	0.003580	101	70	130			
Iron	0.48	0.020	0.5000	0	95.0	70	130			
Manganese	0.46	0.0020	0.5000	0.0003600	92.5	70	130			
Zinc	0.43	0.010	0.5000	0	87.0	70	130			

Sample ID	1610E79-001EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	FB102816		Batch ID:	28635		RunNo:	38830			
Prep Date:	11/14/2016		Analysis Date:	11/18/2016		SeqNo:	1213477		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.47	0.0020	0.5000	0	94.6	70	130	0.405	20	
Chromium	0.47	0.0060	0.5000	0	93.9	70	130	0.588	20	
Copper	0.51	0.0060	0.5000	0.003580	101	70	130	0.358	20	
Iron	0.48	0.020	0.5000	0	96.5	70	130	1.51	20	
Manganese	0.47	0.0020	0.5000	0.0003600	93.3	70	130	0.844	20	
Zinc	0.43	0.010	0.5000	0	86.6	70	130	0.435	20	

Sample ID	1610E79-005EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	MKTF-24		Batch ID:	28635		RunNo:	38846			
Prep Date:	11/14/2016		Analysis Date:	11/19/2016		SeqNo:	1214373		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	97.0	70	130			
Chromium	0.48	0.0060	0.5000	0	96.9	70	130			
Copper	0.52	0.0060	0.5000	0	105	70	130			
Silver	0.082	0.0050	0.1000	0	82.0	70	130			
Zinc	0.46	0.010	0.5000	0.006470	91.5	70	130			

Sample ID	1610E79-005EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	MKTF-24		Batch ID:	28635		RunNo:	38846			
Prep Date:	11/14/2016		Analysis Date:	11/19/2016		SeqNo:	1214374		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	97.4	70	130	0.409	20	
Chromium	0.49	0.0060	0.5000	0	97.1	70	130	0.206	20	
Copper	0.53	0.0060	0.5000	0	105	70	130	0.304	20	
Silver	0.091	0.0050	0.1000	0	91.4	70	130	10.9	20	
Zinc	0.46	0.010	0.5000	0.006470	91.5	70	130	0.0797	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID MB-28799	SampType: MBLK		TestCode: EPA Method 200.7: Total Metals							
Client ID: PBW	Batch ID: 28799		RunNo: 38939							
Prep Date: 11/22/2016	Analysis Date: 11/23/2016		SeqNo: 1217617		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	0.0030	0.0050								J

Sample ID LCS-28799	SampType: LCS		TestCode: EPA Method 200.7: Total Metals							
Client ID: LCSW	Batch ID: 28799		RunNo: 38939							
Prep Date: 11/22/2016	Analysis Date: 11/23/2016		SeqNo: 1217618		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	96.7	85	115			
Iron	0.48	0.020	0.5000	0	95.1	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Silver	0.099	0.0050	0.1000	0	98.9	85	115			

Sample ID LLCS-28799	SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals							
Client ID: BatchQC	Batch ID: 28799		RunNo: 38939							
Prep Date: 11/22/2016	Analysis Date: 11/23/2016		SeqNo: 1217619		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	94.5	50	150			J
Iron	0.020	0.020	0.02000	0	102	50	150			
Manganese	0.0020	0.0020	0.002000	0	103	50	150			
Silver	0.0048	0.0050	0.005000	0	97.0	50	150			J

Sample ID 1610E79-001EMS	SampType: MS		TestCode: EPA Method 200.7: Total Metals							
Client ID: FB102816	Batch ID: 28799		RunNo: 38939							
Prep Date: 11/22/2016	Analysis Date: 11/23/2016		SeqNo: 1218117		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	96.7	70	130			

Sample ID 1610E79-001EMSD	SampType: MSD		TestCode: EPA Method 200.7: Total Metals							
Client ID: FB102816	Batch ID: 28799		RunNo: 38939							
Prep Date: 11/22/2016	Analysis Date: 11/23/2016		SeqNo: 1218118		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	97.2	70	130	0.551	20	

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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	1610E79-001EMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	FB102816	Batch ID:	28799	RunNo:	38985					
Prep Date:	11/22/2016	Analysis Date:	11/28/2016	SeqNo:	1219653	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.1	70	130			

Sample ID	1610E79-001EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	FB102816	Batch ID:	28799	RunNo:	38985					
Prep Date:	11/22/2016	Analysis Date:	11/28/2016	SeqNo:	1219654	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.2	70	130	0.0917	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: LCSW	Batch ID: D38648			RunNo: 38648						
Prep Date:	Analysis Date: 11/11/2016			SeqNo: 1207927		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.3	85	115			
Lead	0.012	0.00050	0.01250	0	92.9	85	115			
Selenium	0.023	0.0010	0.02500	0	93.1	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: D38648			RunNo: 38648						
Prep Date:	Analysis Date: 11/11/2016			SeqNo: 1207928		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00089	0.0010	0.001000	0	89.0	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.8	50	150			J
Selenium	0.00094	0.0010	0.001000	0	94.4	50	150			J

Sample ID MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID: PBW	Batch ID: D38648			RunNo: 38648						
Prep Date:	Analysis Date: 11/11/2016			SeqNo: 1207929		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								

Sample ID LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: LCSW	Batch ID: B38697			RunNo: 38697						
Prep Date:	Analysis Date: 11/14/2016			SeqNo: 1208642		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	101	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: B38697			RunNo: 38697						
Prep Date:	Analysis Date: 11/14/2016			SeqNo: 1208645		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00055	0.00050	0.0005000	0	110	50	150			
Uranium	0.00051	0.00050	0.0005000	0	102	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB		SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW		Batch ID: B38697		RunNo: 38697					
Prep Date:			Analysis Date: 11/14/2016		SeqNo: 1208650		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: A38728		RunNo: 38728					
Prep Date:			Analysis Date: 11/15/2016		SeqNo: 1210049		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	96.9	85	115			
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			

Sample ID	LLLCS		SampType: LCSLL		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: A38728		RunNo: 38728					
Prep Date:			Analysis Date: 11/15/2016		SeqNo: 1210054		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	103	50	150			
Selenium	0.0011	0.0010	0.001000	0	112	50	150			

Sample ID	MB		SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW		Batch ID: A38728		RunNo: 38728					
Prep Date:			Analysis Date: 11/15/2016		SeqNo: 1210058		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								

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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28635		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	28635		RunNo:	38717			
Prep Date:	11/14/2016		Analysis Date:	11/15/2016		SeqNo:	1209351	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-28635		SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW		Batch ID:	28635		RunNo:	38717			
Prep Date:	11/14/2016		Analysis Date:	11/15/2016		SeqNo:	1209352	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	97.1	85	115			
Lead	0.012	0.00050	0.01250	0	99.3	85	115			
Selenium	0.024	0.0010	0.02500	0	96.5	85	115			
Uranium	0.012	0.00050	0.01250	0	97.7	85	115			

Sample ID	MSLLLCS-28635		SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	BatchQC		Batch ID:	28635		RunNo:	38717			
Prep Date:	11/14/2016		Analysis Date:	11/15/2016		SeqNo:	1209353	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	97.2	50	150			J
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	98.8	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	LCS-28644		SampType: LCS		TestCode: EPA Method 245.1: Mercury					
Client ID:	LCSW		Batch ID: 28644		RunNo: 38727					
Prep Date:	11/14/2016		Analysis Date: 11/15/2016		SeqNo: 1209661		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	101	80	120			

Sample ID	MB-28644		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 28644		RunNo: 38727					
Prep Date:	11/14/2016		Analysis Date: 11/15/2016		SeqNo: 1209672		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R38416		RunNo: 38416							
Prep Date:	Analysis Date: 11/2/2016		SeqNo: 1199847		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
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: R38416		RunNo: 38416							
Prep Date:	Analysis Date: 11/2/2016		SeqNo: 1199848		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Bromide	2.3	0.10	2.500	0	92.7	90	110			
Sulfate	9.1	0.50	10.00	0	90.6	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	93.8	90	110			

Sample ID 1610E79-001DMS	SampType: ms		TestCode: EPA Method 300.0: Anions							
Client ID: FB102816	Batch ID: R38416		RunNo: 38416							
Prep Date:	Analysis Date: 11/2/2016		SeqNo: 1199874		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	74.5	121			
Bromide	2.4	0.10	2.500	0	95.5	74.6	115			
Sulfate	9.4	0.50	10.00	0	94.1	83	118			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.1	72.9	117			

Sample ID 1610E79-001DMSD	SampType: msd		TestCode: EPA Method 300.0: Anions							
Client ID: FB102816	Batch ID: R38416		RunNo: 38416							
Prep Date:	Analysis Date: 11/2/2016		SeqNo: 1199875		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.56	0.10	0.5000	0	112	74.5	121	3.64	20	
Bromide	2.5	0.10	2.500	0	99.5	74.6	115	4.19	20	
Sulfate	9.8	0.50	10.00	0	98.3	83	118	4.36	20	
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	72.9	117	4.48	20	

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R38550		RunNo: 38550							
Prep Date:	Analysis Date: 11/8/2016		SeqNo: 1204438		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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R38550			RunNo: 38550						
Prep Date:	Analysis Date: 11/8/2016			SeqNo: 1204438		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Phosphorus, Orthophosphate (As P)	ND	0.50								

Sample ID LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch ID: R38550			RunNo: 38550						
Prep Date:	Analysis Date: 11/8/2016			SeqNo: 1204439		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.3	90	110			
Phosphorus, Orthophosphate (As P)	4.6	0.50	5.000	0	91.6	90	110			

Sample ID MB	SampType: mblk			TestCode: EPA Method 300.0: Anions						
Client ID: PBW	Batch ID: R38643			RunNo: 38643						
Prep Date:	Analysis Date: 11/11/2016			SeqNo: 1207025		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: R38643			RunNo: 38643						
Prep Date:	Analysis Date: 11/11/2016			SeqNo: 1207026		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28411		SampType:	MBLK		TestCode:	EPA Method 8011/504.1: EDB			
Client ID:	PBW		Batch ID:	28411		RunNo:	38404			
Prep Date:	11/2/2016		Analysis Date:	11/2/2016		SeqNo:	1199357	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-28411		SampType:	LCS		TestCode:	EPA Method 8011/504.1: EDB			
Client ID:	LCSW		Batch ID:	28411		RunNo:	38404			
Prep Date:	11/2/2016		Analysis Date:	11/2/2016		SeqNo:	1199358	Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.097	0.010	0.1000	0	96.6	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	LCS-28388		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 28388		RunNo: 38355					
Prep Date:	11/1/2016		Analysis Date: 11/2/2016		SeqNo: 1199608		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	0	115	63.2	155			
Surr: DNOP	0.57		0.5000		114	77.1	144			

Sample ID	MB-28388		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW		Batch ID: 28388		RunNo: 38355					
Prep Date:	11/1/2016		Analysis Date: 11/2/2016		SeqNo: 1199609		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		115	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID RB	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBW	Batch ID: G38456			RunNo: 38456						
Prep Date:	Analysis Date: 11/4/2016			SeqNo: 1201414			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		92.0	66.4	120			

Sample ID 2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSW	Batch ID: G38456			RunNo: 38456						
Prep Date:	Analysis Date: 11/4/2016			SeqNo: 1201415			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	96.4	80	120			
Surr: BFB	19		20.00		94.1	66.4	120			

Sample ID 1610E79-005BMS	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: MKTF-24	Batch ID: G38456			RunNo: 38528						
Prep Date:	Analysis Date: 11/8/2016			SeqNo: 1203931			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	52	2.5	25.00	30.45	86.6	64.8	129			
Surr: BFB	1000		1000		103	66.4	120			

Sample ID 1610E79-005BMSD	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: MKTF-24	Batch ID: G38456			RunNo: 38528						
Prep Date:	Analysis Date: 11/8/2016			SeqNo: 1203932			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	51	2.5	25.00	30.45	83.4	64.8	129	1.51	20	
Surr: BFB	1000		1000		103	66.4	120	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W38511			RunNo: 38511					
Prep Date:		Analysis Date: 11/7/2016			SeqNo: 1202758	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	0.31	3.0								J
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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W38511			RunNo: 38511					
Prep Date:		Analysis Date: 11/7/2016			SeqNo: 1202758		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	0.48	10								J
Methylene Chloride	0.26	3.0								J
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	0.14	1.0								J
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.9	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: W38511			RunNo: 38511					
Prep Date:		Analysis Date: 11/7/2016			SeqNo: 1202759		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.3	70	130			
Toluene	20	1.0	20.00	0	99.0	70	130			
Chlorobenzene	19	1.0	20.00	0	96.9	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: W38511			RunNo: 38511					
Prep Date:	Analysis Date: 11/7/2016			SeqNo: 1202759		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	93.2	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.3	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.1	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.8	70	130			
Surr: Toluene-d8	9.6		10.00		96.2	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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	LCS-28386		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 28386		RunNo: 38422					
Prep Date:	11/1/2016		Analysis Date: 11/3/2016		SeqNo: 1200437		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	42.9	100			
4-Chloro-3-methylphenol	140	10	200.0	0	70.2	36.2	110			
2-Chlorophenol	120	10	200.0	0	58.6	33.4	97.8			
1,4-Dichlorobenzene	48	10	100.0	0	48.0	32.8	79.3			
2,4-Dinitrotoluene	58	10	100.0	0	58.0	34.9	107			
N-Nitrosodi-n-propylamine	61	10	100.0	0	61.0	30.7	111			
4-Nitrophenol	97	10	200.0	0	48.5	15	91.9			
Pentachlorophenol	110	20	200.0	0	53.9	33.3	93.5			
Phenol	99	10	200.0	0	49.7	20.9	86.4			
Pyrene	59	10	100.0	0	58.9	45.6	111			
1,2,4-Trichlorobenzene	54	10	100.0	0	54.2	38.7	88.2			
Surr: 2-Fluorophenol	100		200.0		51.6	15	98.1			
Surr: Phenol-d5	110		200.0		52.6	15	80.7			
Surr: 2,4,6-Tribromophenol	120		200.0		62.3	15	112			
Surr: Nitrobenzene-d5	58		100.0		58.3	27.2	90.7			
Surr: 2-Fluorobiphenyl	53		100.0		53.5	23.3	85.6			
Surr: 4-Terphenyl-d14	51		100.0		50.7	27.6	107			

Sample ID	MB-28386		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28386		RunNo: 38422					
Prep Date:	11/1/2016		Analysis Date: 11/3/2016		SeqNo: 1200438		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	8.7	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	6.5	10								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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28386		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28386		RunNo: 38422					
Prep Date:	11/1/2016		Analysis Date: 11/3/2016		SeqNo: 1200438		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	2.7	10								J
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	6.7	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	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
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#: 1610E79

06-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28386		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28386		RunNo: 38422					
Prep Date:	11/1/2016		Analysis Date: 11/3/2016		SeqNo: 1200438		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		61.9	15	98.1			
Surr: Phenol-d5	120		200.0		58.0	15	80.7			
Surr: 2,4,6-Tribromophenol	140		200.0		70.0	15	112			
Surr: Nitrobenzene-d5	70		100.0		70.2	27.2	90.7			
Surr: 2-Fluorobiphenyl	62		100.0		61.9	23.3	85.6			
Surr: 4-Terphenyl-d14	54		100.0		54.1	27.6	107			

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

Chain-of-Custody Record		Turn-Around Time:	
Client:	WESTERN REFINING SW, INC.	☒ Standard	☐ Rush
GALLUP REFINERY		Project Name:	
Mailing Address:	92 GIANT CROSSING RD	2016 4TH QTR (MKT)	
	GALLUP NM 87501	Project #:	
Phone #:	505-722-0231	Project Manager:	
Email or Fax#:	CHERYL.JOHNSON@WNR.COM	CHERYL JOHNSON	
QA/QC Package:		Sampler: TRACY PAYNE	
☐ Standard	☒ Level 4 (Full Validation)	On Ice: ☒ Yes ☐ No	
Accreditation		Sample Temperature: 11	
☐ NELAP	☐ Other		
EDD (Type)	EXCEL		

Client:	WESTERN REFINING SW, INC.
GALLUP REFINERY	
Mailing Address:	92 GIANT CROSSING RD
	GALLUP NM 87301
Phone #:	505-722-0231
Email or Fax#:	CHERYL JOHNSON @ WNR.COM
QA/QC Package:	
☐ Standard	☒ Level 4 (Full Validation)
Accreditation	
☐ NELAP	☐ Other _____
☒ EDD (Type)	EXCEL

[illegible]

Turn-Around Time:	☒ Standard ☐ Rush
Project Name:	2016 4TH QTR (MKTG)
Project #:	

Project Manager:	
	<i>CHERYL JOHNSON</i>
Sampler:	<i>TRACY PAYNE</i>
On Ice:	☒ Yes ☐ No
Sample Temperature:	<i>11</i>

Container Type and #	Preservative Type	HEAL No.
500 ML PLASTIC-1	HNO ₃	1610 E79
125 ML PLASTIC-1	HNO ₃	207
125 ML PLASTIC-1	H ₂ SO ₄	207
500 ML PLASTIC-1	NEAT	207
40 mL VOA-6	HCL	208
1 L AMBER-1	NEAT	208
250 ML AMBER-1	NEAT	208
500 ML PLASTIC-1	HNO ₃	208
125 ML PLASTIC-1	HNO ₃	208
125 ML PLASTIC-1	H ₂ SO ₄	208
500 ML PLASTIC-1	NEAT	208
40 ML VOA-4	HCL	209
Received by: 		Date Time 10/29/16 0840
Received by: 		Date Time



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

[illegible]

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

December 13, 2016

Cheryl Johnson

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

RE: 2016 4th QTR (MKTF)

OrderNo.: 1611072

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 12 sample(s) on 11/1/2016 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', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-31

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 9:45:00 AM

Lab ID: 1611072-001

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
							Analyst: JME	
1,2-Dibromoethane	0.0035	0.0033	0.010	J	µg/L	1	11/10/2016 1:39:33 PM	28583
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	11/3/2016 12:35:16 PM	28435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/3/2016 12:35:16 PM	28435
Surr: DNOP	108	0	77.1-144		%Rec	1	11/3/2016 12:35:16 PM	28435
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	0.16	0.025	0.050		mg/L	1	11/8/2016 12:41:10 PM	G38528
Surr: BFB	98.6	0	66.4-120		%Rec	1	11/8/2016 12:41:10 PM	G38528
EPA METHOD 300.0: ANIONS								
							Analyst: LGT	
Fluoride	ND	0.050	0.10		mg/L	1	11/2/2016 5:46:31 PM	R38417
Chloride	720	5.1	50		mg/L	100	11/8/2016 4:31:46 PM	R38550
Bromide	4.6	0.87	2.0		mg/L	20	11/2/2016 5:58:56 PM	R38417
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/2/2016 5:46:31 PM	R38417
Sulfate	70	2.8	10		mg/L	20	11/2/2016 5:58:56 PM	R38417
Nitrate+Nitrite as N	ND	0.92	2.0		mg/L	10	11/8/2016 7:00:41 PM	R38550
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.13	0.0013	0.0020		mg/L	1	11/28/2016 12:38:16 PM	A38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 12:38:16 PM	A38985
Calcium	150	2.5	5.0		mg/L	5	11/28/2016 12:40:14 PM	A38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 12:38:16 PM	A38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 12:38:16 PM	A38985
Iron	0.020	0.020	0.020		mg/L	1	11/28/2016 12:38:16 PM	A38985
Magnesium	31	0.50	1.0		mg/L	1	11/28/2016 12:38:16 PM	A38985
Manganese	0.018	0.00032	0.0020		mg/L	1	11/28/2016 12:38:16 PM	A38985
Potassium	1.4	0.50	1.0		mg/L	1	11/28/2016 12:38:16 PM	A38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 12:38:16 PM	A38985
Sodium	540	5.0	10		mg/L	10	11/28/2016 7:37:09 PM	A38985
Zinc	ND	0.0028	0.010		mg/L	1	12/1/2016 4:00:27 PM	A39100
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.18	0.00079	0.0020		mg/L	1	11/17/2016 1:31:49 PM	28728
Cadmium	ND	0.0015	0.0020		mg/L	1	11/17/2016 1:31:49 PM	28728
Chromium	ND	0.0027	0.0060		mg/L	1	11/17/2016 1:31:49 PM	28728
Copper	ND	0.0030	0.0060		mg/L	1	11/18/2016 6:00:21 PM	28728
Iron	1.5	0.10	0.10	*	mg/L	5	12/8/2016 12:45:07 PM	28728
Manganese	0.11	0.00027	0.0020	*	mg/L	1	11/17/2016 1:31:49 PM	28728
Silver	ND	0.0015	0.0050		mg/L	1	11/17/2016 1:31:49 PM	28728
Zinc	0.0098	0.0027	0.010	J	mg/L	1	11/30/2016 7:31:30 PM	28879

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-31

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 9:45:00 AM

Lab ID: 1611072-001

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0026	0.00069	0.0050	J	mg/L	5	11/16/2016 8:21:44 PM	B38773
Lead	ND	0.00017	0.00050		mg/L	1	11/15/2016 6:02:52 PM	B38728
Selenium	0.010	0.0011	0.0050		mg/L	5	11/15/2016 6:05:55 PM	B38728
Uranium	0.043	0.00026	0.0025	*	mg/L	5	11/15/2016 6:05:55 PM	B38728
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0026	0.0011	0.0050	J	mg/L	5	11/17/2016 5:34:05 PM	28728
Lead	0.0031	0.000081	0.00050		mg/L	1	11/17/2016 3:21:45 PM	28728
Selenium	0.0064	0.0037	0.020	J	mg/L	20	11/17/2016 5:37:06 PM	28728
Uranium	0.041	0.00087	0.0025	*	mg/L	5	11/17/2016 5:34:05 PM	28728
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 5:39:44 PM	28645
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Acenaphthylene	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Aniline	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Anthracene	ND	2.5	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Azobenzene	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Benzoic acid	9.3	2.6	20	J	µg/L	1	11/8/2016 10:17:35 AM	28471
Benzyl alcohol	ND	3.0	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Bis(2-ethylhexyl)phthalate	6.8	2.6	10	J	µg/L	1	11/8/2016 10:17:35 AM	28471
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Butyl benzyl phthalate	2.9	2.5	10	J	µg/L	1	11/8/2016 10:17:35 AM	28471
Carbazole	ND	2.3	10		µg/L	1	11/8/2016 10:17:35 AM	28471
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
4-Chloroaniline	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2-Chlorophenol	ND	2.2	10		µg/L	1	11/8/2016 10:17:35 AM	28471
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Chrysene	ND	2.8	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2016 4th QTR (MKTF)

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Lab ID: 1611072-001

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	8.4	2.0	10	J	µg/L	1	11/8/2016 10:17:35 AM	28471
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Dibenzofuran	ND	2.5	10		µg/L	1	11/8/2016 10:17:35 AM	28471
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 10:17:35 AM	28471
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 10:17:35 AM	28471
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Diethyl phthalate	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/8/2016 10:17:35 AM	28471
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/8/2016 10:17:35 AM	28471
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/8/2016 10:17:35 AM	28471
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/8/2016 10:17:35 AM	28471
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Fluoranthene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Fluorene	ND	2.7	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Hexachloroethane	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Isophorone	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2-Methylphenol	ND	2.5	10		µg/L	1	11/8/2016 10:17:35 AM	28471
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/8/2016 10:17:35 AM	28471
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/8/2016 10:17:35 AM	28471
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Naphthalene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2-Nitroaniline	ND	2.8	10		µg/L	1	11/8/2016 10:17:35 AM	28471
3-Nitroaniline	ND	2.9	10		µg/L	1	11/8/2016 10:17:35 AM	28471
4-Nitroaniline	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Nitrobenzene	ND	2.8	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2-Nitrophenol	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
4-Nitrophenol	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Pentachlorophenol	ND	2.3	20		µg/L	1	11/8/2016 10:17:35 AM	28471
Phenanthrene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471

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Analytical Report

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CLIENT: Western Refining Southwest, Gallup

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Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 9:45:00 AM

Lab ID: 1611072-001

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	2.0	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Pyrene	ND	3.1	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Pyridine	ND	2.2	10		µg/L	1	11/8/2016 10:17:35 AM	28471
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/8/2016 10:17:35 AM	28471
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/8/2016 10:17:35 AM	28471
Surr: 2-Fluorophenol	26.3	0	15-98.1		%Rec	1	11/8/2016 10:17:35 AM	28471
Surr: Phenol-d5	23.8	0	15-80.7		%Rec	1	11/8/2016 10:17:35 AM	28471
Surr: 2,4,6-Tribromophenol	35.6	0	15-112		%Rec	1	11/8/2016 10:17:35 AM	28471
Surr: Nitrobenzene-d5	60.6	0	27.2-90.7		%Rec	1	11/8/2016 10:17:35 AM	28471
Surr: 2-Fluorobiphenyl	44.7	0	23.3-85.6		%Rec	1	11/8/2016 10:17:35 AM	28471
Surr: 4-Terphenyl-d14	37.6	0	27.6-107		%Rec	1	11/8/2016 10:17:35 AM	28471
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	0.48	0.096	1.0	J	µg/L	1	11/7/2016 2:37:44 PM	R38506
Toluene	0.15	0.12	1.0	J	µg/L	1	11/7/2016 2:37:44 PM	R38506
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Methyl tert-butyl ether (MTBE)	70	0.21	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2-Dichloroethane (EDC)	21	0.12	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Acetone	ND	4.9	10		µg/L	1	11/7/2016 2:37:44 PM	R38506
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 2:37:44 PM	R38506
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 2:37:44 PM	R38506
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Chloroform	0.41	0.089	1.0	J	µg/L	1	11/7/2016 2:37:44 PM	R38506
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
cis-1,2-DCE	1.6	0.12	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,1-Dichloroethane	31	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,1-Dichloroethene	57	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 2:37:44 PM	R38506
Isopropylbenzene	0.71	0.10	1.0	J	µg/L	1	11/7/2016 2:37:44 PM	R38506
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 2:37:44 PM	R38506
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
n-Butylbenzene	0.32	0.16	3.0	J	µg/L	1	11/7/2016 2:37:44 PM	R38506
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
sec-Butylbenzene	0.37	0.12	1.0	J	µg/L	1	11/7/2016 2:37:44 PM	R38506
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,1,1-Trichloroethane	4.8	0.091	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,1,2-Trichloroethane	2.2	0.13	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Trichloroethene (TCE)	3.7	0.18	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 2:37:44 PM	R38506
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 2:37:44 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-31

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 9:45:00 AM

Lab ID: 1611072-001

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	96.3	0	70-130		%Rec	1	11/7/2016 2:37:44 PM	R38506
Surr: 4-Bromofluorobenzene	92.6	0	70-130		%Rec	1	11/7/2016 2:37:44 PM	R38506
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	11/7/2016 2:37:44 PM	R38506
Surr: Toluene-d8	103	0	70-130		%Rec	1	11/7/2016 2:37:44 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 11:00:00 AM

Lab ID: 1611072-002

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 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	11/3/2016 1:40:13 PM	28435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/3/2016 1:40:13 PM	28435
Surr: DNOP	114	0	77.1-144		%Rec	1	11/3/2016 1:40:13 PM	28435
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/8/2016 1:05:33 PM	G38528
Surr: BFB	86.5	0	66.4-120		%Rec	1	11/8/2016 1:05:33 PM	G38528
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	ND	1.0	2.0		mg/L	20	11/2/2016 6:23:45 PM	R38417
Chloride	3700	25	250		mg/L	500	11/8/2016 4:44:10 PM	R38550
Bromide	ND	0.87	2.0		mg/L	20	11/2/2016 6:23:45 PM	R38417
Phosphorus, Orthophosphate (As P)	1.9	1.5	10	JH	mg/L	20	11/2/2016 6:23:45 PM	R38417
Sulfate	500	2.8	10		mg/L	20	11/2/2016 6:23:45 PM	R38417
Nitrate+Nitrite as N	ND	1.8	4.0		mg/L	20	11/8/2016 7:13:05 PM	R38550
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.10	0.0013	0.0020		mg/L	1	11/28/2016 12:42:14 PM	A38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 12:42:14 PM	A38985
Calcium	380	2.5	5.0		mg/L	5	11/28/2016 12:44:08 PM	A38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 12:42:14 PM	A38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 12:42:14 PM	A38985
Iron	0.045	0.020	0.020		mg/L	1	11/28/2016 12:42:14 PM	A38985
Magnesium	71	0.50	1.0		mg/L	1	11/28/2016 12:42:14 PM	A38985
Manganese	0.11	0.00032	0.0020	*	mg/L	1	11/28/2016 12:42:14 PM	A38985
Potassium	8.0	0.50	1.0		mg/L	1	11/28/2016 12:42:14 PM	A38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 12:42:14 PM	A38985
Sodium	2800	25	50		mg/L	50	11/28/2016 7:39:07 PM	A38985
Zinc	0.0029	0.0028	0.010	J	mg/L	1	12/1/2016 4:02:15 PM	A39100
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF	
Barium	0.21	0.00079	0.0020		mg/L	1	11/30/2016 7:36:56 PM	28879
Cadmium	ND	0.0015	0.0020		mg/L	1	11/30/2016 7:36:56 PM	28879
Chromium	0.0028	0.0027	0.0060	J	mg/L	1	11/30/2016 7:36:56 PM	28879
Copper	ND	0.0030	0.0060		mg/L	1	11/30/2016 7:36:56 PM	28879
Iron	5.3	0.20	0.20	*	mg/L	10	11/30/2016 7:38:37 PM	28879
Manganese	0.26	0.00027	0.0020	*	mg/L	1	11/30/2016 7:36:56 PM	28879
Silver	ND	0.0015	0.0050		mg/L	1	11/30/2016 7:36:56 PM	28879
Zinc	0.019	0.0027	0.010		mg/L	1	11/30/2016 7:36:56 PM	28879
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0039	0.00069	0.0050	J	mg/L	5	11/16/2016 8:26:52 PM	B38773

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 11:00:00 AM

Lab ID: 1611072-002

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	ND	0.00084	0.0025		mg/L	5	11/15/2016 6:08:58 PM	B38728
Selenium	0.012	0.0021	0.010		mg/L	10	11/15/2016 6:12:01 PM	B38728
Uranium	0.060	0.00026	0.0025	*	mg/L	5	11/15/2016 6:08:58 PM	B38728
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0041	0.0011	0.0050	J	mg/L	5	11/17/2016 5:40:06 PM	28728
Lead	0.0084	0.00041	0.0025		mg/L	5	11/17/2016 5:40:06 PM	28728
Selenium	0.0082	0.0037	0.020	J	mg/L	20	11/17/2016 5:43:06 PM	28728
Uranium	0.060	0.00087	0.0025	*	mg/L	5	11/17/2016 5:40:06 PM	28728
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	0.000055	0.000053	0.00020	J	mg/L	1	11/15/2016 5:41:45 PM	28645
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Acenaphthylene	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Aniline	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Anthracene	ND	2.5	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Azobenzene	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Benzoic acid	8.5	2.6	20	J	µg/L	1	11/8/2016 11:41:01 AM	28471
Benzyl alcohol	ND	3.0	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Bis(2-ethylhexyl)phthalate	6.6	2.6	10	J	µg/L	1	11/8/2016 11:41:01 AM	28471
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Butyl benzyl phthalate	2.8	2.5	10	J	µg/L	1	11/8/2016 11:41:01 AM	28471
Carbazole	ND	2.3	10		µg/L	1	11/8/2016 11:41:01 AM	28471
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
4-Chloroaniline	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2-Chlorophenol	ND	2.2	10		µg/L	1	11/8/2016 11:41:01 AM	28471
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Chrysene	ND	2.8	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Di-n-octyl phthalate	8.4	2.0	10	J	µg/L	1	11/8/2016 11:41:01 AM	28471

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-40

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 11:00:00 AM

Lab ID: 1611072-002

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Dibenzofuran	ND	2.5	10		µg/L	1	11/8/2016 11:41:01 AM	28471
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 11:41:01 AM	28471
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 11:41:01 AM	28471
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Diethyl phthalate	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/8/2016 11:41:01 AM	28471
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/8/2016 11:41:01 AM	28471
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/8/2016 11:41:01 AM	28471
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/8/2016 11:41:01 AM	28471
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Fluoranthene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Fluorene	ND	2.7	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Hexachloroethane	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Isophorone	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2-Methylphenol	ND	2.5	10		µg/L	1	11/8/2016 11:41:01 AM	28471
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/8/2016 11:41:01 AM	28471
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/8/2016 11:41:01 AM	28471
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Naphthalene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2-Nitroaniline	ND	2.8	10		µg/L	1	11/8/2016 11:41:01 AM	28471
3-Nitroaniline	ND	2.9	10		µg/L	1	11/8/2016 11:41:01 AM	28471
4-Nitroaniline	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Nitrobenzene	ND	2.8	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2-Nitrophenol	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
4-Nitrophenol	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Pentachlorophenol	ND	2.3	20		µg/L	1	11/8/2016 11:41:01 AM	28471
Phenanthrene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Phenol	ND	2.0	10		µg/L	1	11/8/2016 11:41:01 AM	28471

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 11:00:00 AM

Lab ID: 1611072-002

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Pyridine	ND	2.2	10		µg/L	1	11/8/2016 11:41:01 AM	28471
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/8/2016 11:41:01 AM	28471
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/8/2016 11:41:01 AM	28471
Surr: 2-Fluorophenol	19.7	0	15-98.1		%Rec	1	11/8/2016 11:41:01 AM	28471
Surr: Phenol-d5	18.6	0	15-80.7		%Rec	1	11/8/2016 11:41:01 AM	28471
Surr: 2,4,6-Tribromophenol	31.5	0	15-112		%Rec	1	11/8/2016 11:41:01 AM	28471
Surr: Nitrobenzene-d5	46.3	0	27.2-90.7		%Rec	1	11/8/2016 11:41:01 AM	28471
Surr: 2-Fluorobiphenyl	39.0	0	23.3-85.6		%Rec	1	11/8/2016 11:41:01 AM	28471
Surr: 4-Terphenyl-d14	39.6	0	27.6-107		%Rec	1	11/8/2016 11:41:01 AM	28471
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Toluene	0.15	0.12	1.0	J	µg/L	1	11/7/2016 3:06:26 PM	R38506
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Methyl tert-butyl ether (MTBE)	0.30	0.21	1.0	J	µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2-Dichloroethane (EDC)	0.37	0.12	1.0	J	µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Acetone	ND	4.9	10		µg/L	1	11/7/2016 3:06:26 PM	R38506
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 3:06:26 PM	R38506
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 3:06:26 PM	R38506
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Chloroform	0.20	0.089	1.0	J	µg/L	1	11/7/2016 3:06:26 PM	R38506
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 11:00:00 AM

Lab ID: 1611072-002

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,1-Dichloroethane	0.64	0.11	1.0	J	µg/L	1	11/7/2016 3:06:26 PM	R38506
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 3:06:26 PM	R38506
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 3:06:26 PM	R38506
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 3:06:26 PM	R38506
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 3:06:26 PM	R38506
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	11/7/2016 3:06:26 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 11:00:00 AM

Lab ID: 1611072-002

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 4-Bromofluorobenzene	96.1	0	70-130		%Rec	1	11/7/2016 3:06:26 PM	R38506
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	11/7/2016 3:06:26 PM	R38506
Surr: Toluene-d8	106	0	70-130		%Rec	1	11/7/2016 3:06:26 PM	R38506

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-43

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 12:00:00 PM

Lab ID: 1611072-003

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 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	11/3/2016 2:02:19 PM	28435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/3/2016 2:02:19 PM	28435
Surr: DNOP	110	0	77.1-144		%Rec	1	11/3/2016 2:02:19 PM	28435
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/8/2016 1:29:59 PM	G38528
Surr: BFB	88.8	0	66.4-120		%Rec	1	11/8/2016 1:29:59 PM	G38528
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	ND	1.0	2.0		mg/L	20	11/2/2016 7:13:24 PM	R38417
Chloride	19000	100	1000		mg/L	2000	11/8/2016 5:09:00 PM	R38550
Bromide	13	4.4	10		mg/L	100	11/11/2016 6:22:47 PM	R38671
Phosphorus, Orthophosphate (As P)	ND	1.5	10	H	mg/L	20	11/2/2016 7:13:24 PM	R38417
Sulfate	1300	280	1000		mg/L	2000	11/8/2016 5:09:00 PM	R38550
Nitrate+Nitrite as N	62	9.2	20	*	mg/L	100	11/8/2016 7:25:30 PM	R38550
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.13	0.0066	0.010		mg/L	5	11/28/2016 12:55:37 PM	A38985
Cadmium	ND	0.0037	0.010		mg/L	5	11/28/2016 12:55:37 PM	A38985
Calcium	4700	50	100		mg/L	100	11/28/2016 7:43:15 PM	A38985
Chromium	ND	0.0088	0.030		mg/L	5	11/28/2016 12:55:37 PM	A38985
Copper	ND	0.020	0.030		mg/L	5	11/28/2016 12:55:37 PM	A38985
Iron	0.48	0.020	0.020	*	mg/L	1	11/28/2016 12:53:18 PM	A38985
Magnesium	680	5.0	10		mg/L	10	11/28/2016 7:41:05 PM	A38985
Manganese	19	0.032	0.20	*	mg/L	100	11/28/2016 7:43:15 PM	A38985
Potassium	19	0.50	1.0		mg/L	1	11/28/2016 12:53:18 PM	A38985
Silver	ND	0.014	0.025		mg/L	5	11/28/2016 12:55:37 PM	A38985
Sodium	8800	50	100		mg/L	100	11/28/2016 7:43:15 PM	A38985
Zinc	0.016	0.014	0.050	J	mg/L	5	12/5/2016 6:18:02 PM	A39164
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.18	0.00079	0.0020		mg/L	1	11/17/2016 1:40:53 PM	28728
Cadmium	ND	0.0015	0.0020		mg/L	1	11/17/2016 1:40:53 PM	28728
Chromium	ND	0.0027	0.0060		mg/L	1	11/17/2016 1:40:53 PM	28728
Copper	ND	0.015	0.030		mg/L	5	11/18/2016 6:50:44 PM	28728
Iron	2.2	0.10	0.10	*	mg/L	5	11/18/2016 6:50:44 PM	28728
Manganese	18	0.014	0.10	*	mg/L	50	11/18/2016 6:52:24 PM	28728
Silver	ND	0.0015	0.0050		mg/L	1	11/17/2016 1:40:53 PM	28728
Zinc	0.032	0.013	0.050	J	mg/L	5	12/8/2016 12:55:05 PM	28879
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	ND	0.050	0.050		mg/L	50	11/16/2016 8:37:08 PM	B38773

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-43

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 12:00:00 PM

Lab ID: 1611072-003

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	ND	0.0034	0.010		mg/L	20	11/15/2016 6:18:07 PM	B38728
Selenium	ND	0.50	0.50		mg/L	50	11/16/2016 8:37:08 PM	B38773
Uranium	0.19	0.0026	0.025	*	mg/L	50	11/22/2016 1:23:34 PM	B38934
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.030	0.011	0.050	J*	mg/L	50	11/17/2016 6:01:12 PM	28728
Lead	ND	0.0041	0.025		mg/L	50	11/17/2016 6:01:12 PM	28728
Selenium	0.084	0.0094	0.050	*	mg/L	50	11/17/2016 6:01:12 PM	28728
Uranium	0.19	0.0087	0.025	*	mg/L	50	11/17/2016 6:01:12 PM	28728
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 5:43:46 PM	28645
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Acenaphthylene	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Aniline	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Anthracene	ND	2.5	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Azobenzene	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Benzoic acid	8.3	2.6	20	J	µg/L	1	11/8/2016 12:08:53 PM	28471
Benzyl alcohol	ND	3.0	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Bis(2-ethylhexyl)phthalate	6.3	2.6	10	J	µg/L	1	11/8/2016 12:08:53 PM	28471
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Butyl benzyl phthalate	2.8	2.5	10	J	µg/L	1	11/8/2016 12:08:53 PM	28471
Carbazole	ND	2.3	10		µg/L	1	11/8/2016 12:08:53 PM	28471
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
4-Chloroaniline	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2-Chlorophenol	ND	2.2	10		µg/L	1	11/8/2016 12:08:53 PM	28471
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Chrysene	ND	2.8	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Di-n-octyl phthalate	8.3	2.0	10	J	µg/L	1	11/8/2016 12:08:53 PM	28471

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-43

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 12:00:00 PM

Lab ID: 1611072-003

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Dibenzofuran	ND	2.5	10		µg/L	1	11/8/2016 12:08:53 PM	28471
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 12:08:53 PM	28471
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 12:08:53 PM	28471
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Diethyl phthalate	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/8/2016 12:08:53 PM	28471
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/8/2016 12:08:53 PM	28471
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/8/2016 12:08:53 PM	28471
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/8/2016 12:08:53 PM	28471
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Fluoranthene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Fluorene	ND	2.7	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Hexachloroethane	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Isophorone	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2-Methylphenol	ND	2.5	10		µg/L	1	11/8/2016 12:08:53 PM	28471
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/8/2016 12:08:53 PM	28471
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/8/2016 12:08:53 PM	28471
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Naphthalene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2-Nitroaniline	ND	2.8	10		µg/L	1	11/8/2016 12:08:53 PM	28471
3-Nitroaniline	ND	2.9	10		µg/L	1	11/8/2016 12:08:53 PM	28471
4-Nitroaniline	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Nitrobenzene	ND	2.8	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2-Nitrophenol	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
4-Nitrophenol	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Pentachlorophenol	ND	2.3	20		µg/L	1	11/8/2016 12:08:53 PM	28471
Phenanthrene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Phenol	ND	2.0	10		µg/L	1	11/8/2016 12:08:53 PM	28471

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-43

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 12:00:00 PM

Lab ID: 1611072-003

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	3.1	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Pyridine	ND	2.2	10		µg/L	1	11/8/2016 12:08:53 PM	28471
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/8/2016 12:08:53 PM	28471
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/8/2016 12:08:53 PM	28471
Surr: 2-Fluorophenol	21.0	0	15-98.1		%Rec	1	11/8/2016 12:08:53 PM	28471
Surr: Phenol-d5	17.6	0	15-80.7		%Rec	1	11/8/2016 12:08:53 PM	28471
Surr: 2,4,6-Tribromophenol	24.2	0	15-112		%Rec	1	11/8/2016 12:08:53 PM	28471
Surr: Nitrobenzene-d5	45.2	0	27.2-90.7		%Rec	1	11/8/2016 12:08:53 PM	28471
Surr: 2-Fluorobiphenyl	31.2	0	23.3-85.6		%Rec	1	11/8/2016 12:08:53 PM	28471
Surr: 4-Terphenyl-d14	24.1	0	27.6-107	S	%Rec	1	11/8/2016 12:08:53 PM	28471
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Toluene	0.13	0.12	1.0	J	µg/L	1	11/7/2016 3:35:12 PM	R38506
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Acetone	7.0	4.9	10	J	µg/L	1	11/7/2016 3:35:12 PM	R38506
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 3:35:12 PM	R38506
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 3:35:12 PM	R38506
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Chloroform	0.10	0.089	1.0	J	µg/L	1	11/7/2016 3:35:12 PM	R38506
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506

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-43

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 12:00:00 PM

Lab ID: 1611072-003

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 3:35:12 PM	R38506
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 3:35:12 PM	R38506
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 3:35:12 PM	R38506
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 3:35:12 PM	R38506
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	11/7/2016 3:35:12 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-43

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 12:00:00 PM

Lab ID: 1611072-003

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 4-Bromofluorobenzene	96.5	0	70-130		%Rec	1	11/7/2016 3:35:12 PM	R38506
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	11/7/2016 3:35:12 PM	R38506
Surr: Toluene-d8	105	0	70-130		%Rec	1	11/7/2016 3:35:12 PM	R38506

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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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 1:10:00 PM

Lab ID: 1611072-004

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	62	0.69	1.0		mg/L	1	11/3/2016 2:23:59 PM	28435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/3/2016 2:23:59 PM	28435
Surr: DNOP	114	0	77.1-144		%Rec	1	11/3/2016 2:23:59 PM	28435
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	0.11	0.025	0.050		mg/L	1	11/8/2016 1:54:28 PM	G38528
Surr: BFB	92.9	0	66.4-120		%Rec	1	11/8/2016 1:54:28 PM	G38528
EPA METHOD 300.0: ANIONS							Analyst: LGT	
Fluoride	ND	0.25	0.50		mg/L	5	11/2/2016 7:25:49 PM	R38417
Chloride	900	2.5	25		mg/L	50	11/8/2016 5:21:24 PM	R38550
Bromide	3.9	0.22	0.50		mg/L	5	11/2/2016 7:25:49 PM	R38417
Phosphorus, Orthophosphate (As P)	0.43	0.38	2.5	JH	mg/L	5	11/2/2016 7:25:49 PM	R38417
Sulfate	110	0.71	2.5		mg/L	5	11/2/2016 7:25:49 PM	R38417
Nitrate+Nitrite as N	ND	0.92	2.0		mg/L	10	11/8/2016 7:37:55 PM	R38550
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.075	0.0013	0.0020		mg/L	1	11/28/2016 12:57:47 PM	A38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 12:57:47 PM	A38985
Calcium	20	0.50	1.0		mg/L	1	11/28/2016 12:57:47 PM	A38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 12:57:47 PM	A38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 12:57:47 PM	A38985
Iron	0.18	0.020	0.020		mg/L	1	11/28/2016 12:57:47 PM	A38985
Magnesium	2.6	0.50	1.0		mg/L	1	11/28/2016 12:57:47 PM	A38985
Manganese	0.30	0.00032	0.0020	*	mg/L	1	11/28/2016 12:57:47 PM	A38985
Potassium	1.7	0.50	1.0		mg/L	1	11/28/2016 12:57:47 PM	A38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 12:57:47 PM	A38985
Sodium	700	5.0	10		mg/L	10	11/28/2016 7:45:06 PM	A38985
Zinc	ND	0.0028	0.010		mg/L	1	12/1/2016 4:06:10 PM	A39100
EPA METHOD 200.7: TOTAL METALS							Analyst: TES	
Barium	0.11	0.00079	0.0020		mg/L	1	11/18/2016 6:57:21 PM	28728
Cadmium	ND	0.0015	0.0020		mg/L	1	11/18/2016 6:57:21 PM	28728
Chromium	ND	0.0027	0.0060		mg/L	1	11/18/2016 6:57:21 PM	28728
Copper	0.0052	0.0030	0.0060	J	mg/L	1	11/18/2016 6:57:21 PM	28728
Iron	1.3	0.10	0.10	*	mg/L	5	11/18/2016 6:59:04 PM	28728
Manganese	0.31	0.00027	0.0020	*	mg/L	1	11/18/2016 6:57:21 PM	28728
Silver	ND	0.0015	0.0050		mg/L	1	11/18/2016 6:57:21 PM	28728
Zinc	0.0078	0.0027	0.010	J	mg/L	1	11/30/2016 7:42:33 PM	28879
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0044	0.0014	0.010	J	mg/L	10	11/16/2016 8:42:17 PM	B38773

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 1:10:00 PM

Lab ID: 1611072-004

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	ND	0.00084	0.0025		mg/L	5	11/15/2016 6:21:10 PM	B38728
Selenium	0.012	0.0011	0.0050		mg/L	5	11/15/2016 6:21:10 PM	B38728
Uranium	0.013	0.00026	0.0025		mg/L	5	11/15/2016 6:21:10 PM	B38728
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0047	0.0011	0.0050	J	mg/L	5	11/17/2016 6:04:12 PM	28728
Lead	0.0028	0.000081	0.00050		mg/L	1	11/17/2016 3:39:51 PM	28728
Selenium	0.0095	0.0037	0.020	J	mg/L	20	11/17/2016 6:13:13 PM	28728
Uranium	0.014	0.00087	0.0025		mg/L	5	11/17/2016 6:04:12 PM	28728
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 5:45:49 PM	28645
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Acenaphthylene	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Aniline	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Anthracene	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Azobenzene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Benz(a)anthracene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Benzo(a)pyrene	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Benzo(b)fluoranthene	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Benzo(g,h,i)perylene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Benzo(k)fluoranthene	ND	15	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Benzoic acid	56	13	100	J	µg/L	1	11/8/2016 12:36:39 PM	28471
Benzyl alcohol	ND	15	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Bis(2-chloroethoxy)methane	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Bis(2-chloroethyl)ether	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Bis(2-chloroisopropyl)ether	ND	9.5	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Bis(2-ethylhexyl)phthalate	33	13	50	J	µg/L	1	11/8/2016 12:36:39 PM	28471
4-Bromophenyl phenyl ether	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Butyl benzyl phthalate	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Carbazole	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
4-Chloro-3-methylphenol	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
4-Chloroaniline	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2-Chloronaphthalene	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2-Chlorophenol	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
4-Chlorophenyl phenyl ether	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Chrysene	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Di-n-butyl phthalate	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Di-n-octyl phthalate	37	9.9	50	J	µg/L	1	11/8/2016 12:36:39 PM	28471

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 1:10:00 PM

Lab ID: 1611072-004

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Dibenz(a,h)anthracene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Dibenzofuran	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
1,2-Dichlorobenzene	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
1,3-Dichlorobenzene	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
1,4-Dichlorobenzene	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
3,3'-Dichlorobenzidine	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Diethyl phthalate	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Dimethyl phthalate	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2,4-Dichlorophenol	ND	12	100		µg/L	1	11/8/2016 12:36:39 PM	28471
2,4-Dimethylphenol	ND	15	50		µg/L	1	11/8/2016 12:36:39 PM	28471
4,6-Dinitro-2-methylphenol	ND	9.0	100		µg/L	1	11/8/2016 12:36:39 PM	28471
2,4-Dinitrophenol	ND	14	100		µg/L	1	11/8/2016 12:36:39 PM	28471
2,4-Dinitrotoluene	ND	16	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2,6-Dinitrotoluene	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Fluoranthene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Fluorene	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Hexachlorobenzene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Hexachlorobutadiene	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Hexachlorocyclopentadiene	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Hexachloroethane	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Indeno(1,2,3-cd)pyrene	ND	15	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Isophorone	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
1-Methylnaphthalene	190	15	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2-Methylnaphthalene	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2-Methylphenol	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
3+4-Methylphenol	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
N-Nitrosodi-n-propylamine	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
N-Nitrosodimethylamine	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Naphthalene	16	13	50	J	µg/L	1	11/8/2016 12:36:39 PM	28471
2-Nitroaniline	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
3-Nitroaniline	ND	15	50		µg/L	1	11/8/2016 12:36:39 PM	28471
4-Nitroaniline	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Nitrobenzene	ND	14	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2-Nitrophenol	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
4-Nitrophenol	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Pentachlorophenol	ND	12	100		µg/L	1	11/8/2016 12:36:39 PM	28471
Phenanthrene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Phenol	ND	9.9	50		µg/L	1	11/8/2016 12:36:39 PM	28471

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 1:10:00 PM

Lab ID: 1611072-004

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	ND	15	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Pyridine	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
1,2,4-Trichlorobenzene	ND	13	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2,4,5-Trichlorophenol	ND	11	50		µg/L	1	11/8/2016 12:36:39 PM	28471
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	11/8/2016 12:36:39 PM	28471
Surr: 2-Fluorophenol	24.9	0	15-98.1		%Rec	1	11/8/2016 12:36:39 PM	28471
Surr: Phenol-d5	21.4	0	15-80.7		%Rec	1	11/8/2016 12:36:39 PM	28471
Surr: 2,4,6-Tribromophenol	23.8	0	15-112		%Rec	1	11/8/2016 12:36:39 PM	28471
Surr: Nitrobenzene-d5	59.2	0	27.2-90.7		%Rec	1	11/8/2016 12:36:39 PM	28471
Surr: 2-Fluorobiphenyl	37.0	0	23.3-85.6		%Rec	1	11/8/2016 12:36:39 PM	28471
Surr: 4-Terphenyl-d14	45.1	0	27.6-107		%Rec	1	11/8/2016 12:36:39 PM	28471
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	3.4	0.096	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Toluene	0.49	0.12	1.0	J	µg/L	1	11/7/2016 4:03:59 PM	R38506
Ethylbenzene	1.9	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Methyl tert-butyl ether (MTBE)	0.67	0.21	1.0	J	µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2,4-Trimethylbenzene	5.3	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,3,5-Trimethylbenzene	2.7	0.12	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2-Dichloroethane (EDC)	1.1	0.12	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Naphthalene	24	0.093	2.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1-Methylnaphthalene	13	0.20	4.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
2-Methylnaphthalene	7.2	0.16	4.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Acetone	30	4.9	10		µg/L	1	11/7/2016 4:03:59 PM	R38506
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
2-Butanone	10	0.74	10		µg/L	1	11/7/2016 4:03:59 PM	R38506
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 4:03:59 PM	R38506
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 1:10:00 PM

Lab ID: 1611072-004

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
2-Hexanone	4.2	0.84	10	J	µg/L	1	11/7/2016 4:03:59 PM	R38506
Isopropylbenzene	0.54	0.10	1.0	J	µg/L	1	11/7/2016 4:03:59 PM	R38506
4-Isopropyltoluene	2.3	0.14	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
4-Methyl-2-pentanone	3.7	0.43	10	J	µg/L	1	11/7/2016 4:03:59 PM	R38506
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
n-Propylbenzene	0.68	0.13	1.0	J	µg/L	1	11/7/2016 4:03:59 PM	R38506
sec-Butylbenzene	0.34	0.12	1.0	J	µg/L	1	11/7/2016 4:03:59 PM	R38506
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 4:03:59 PM	R38506
Xylenes, Total	27	0.37	1.5		µg/L	1	11/7/2016 4:03:59 PM	R38506
Surr: 1,2-Dichloroethane-d4	96.6	0	70-130		%Rec	1	11/7/2016 4:03:59 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 1:10:00 PM

Lab ID: 1611072-004

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	11/7/2016 4:03:59 PM	R38506
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	11/7/2016 4:03:59 PM	R38506
Surr: Toluene-d8	103	0	70-130		%Rec	1	11/7/2016 4:03:59 PM	R38506

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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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-32

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 2:15:00 PM

Lab ID: 1611072-005

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 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	11/10/2016 1:54:33 PM	28583
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	11/3/2016 3:15:26 PM	28435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/3/2016 3:15:26 PM	28435
Surr: DNOP	110	0	77.1-144		%Rec	1	11/3/2016 3:15:26 PM	28435
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	0.92	0.025	0.050		mg/L	1	11/8/2016 2:43:27 PM	G38528
Surr: BFB	85.9	0	66.4-120		%Rec	1	11/8/2016 2:43:27 PM	G38528
EPA METHOD 300.0: ANIONS								
							Analyst: LGT	
Fluoride	0.16	0.050	0.10		mg/L	1	11/2/2016 7:50:38 PM	R38417
Chloride	420	2.5	25		mg/L	50	11/8/2016 5:33:48 PM	R38550
Bromide	3.1	0.87	2.0		mg/L	20	11/2/2016 8:03:03 PM	R38417
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/2/2016 7:50:38 PM	R38417
Sulfate	95	2.8	10		mg/L	20	11/2/2016 8:03:03 PM	R38417
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/2/2016 10:44:26 PM	R38417
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.051	0.0013	0.0020		mg/L	1	11/28/2016 1:01:49 PM	A38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 1:01:49 PM	A38985
Calcium	28	0.50	1.0		mg/L	1	11/28/2016 1:01:49 PM	A38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 1:01:49 PM	A38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 1:01:49 PM	A38985
Iron	0.050	0.020	0.020		mg/L	1	11/28/2016 1:01:49 PM	A38985
Magnesium	5.8	0.50	1.0		mg/L	1	11/28/2016 1:01:49 PM	A38985
Manganese	0.056	0.00032	0.0020	*	mg/L	1	11/28/2016 1:01:49 PM	A38985
Potassium	0.81	0.50	1.0	J	mg/L	1	11/28/2016 1:01:49 PM	A38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 1:01:49 PM	A38985
Sodium	630	5.0	10		mg/L	10	11/28/2016 7:46:53 PM	A38985
Zinc	0.0096	0.0028	0.010	J	mg/L	1	12/1/2016 4:07:59 PM	A39100
EPA METHOD 200.7: TOTAL METALS								
							Analyst: TES	
Barium	0.10	0.00079	0.0020		mg/L	1	11/18/2016 7:02:22 PM	28728
Cadmium	ND	0.0015	0.0020		mg/L	1	11/18/2016 7:02:22 PM	28728
Chromium	0.0028	0.0027	0.0060	J	mg/L	1	11/18/2016 7:02:22 PM	28728
Copper	0.0042	0.0030	0.0060	J	mg/L	1	11/18/2016 7:02:22 PM	28728
Iron	3.0	0.10	0.10	*	mg/L	5	11/18/2016 7:03:46 PM	28728
Manganese	0.13	0.00027	0.0020	*	mg/L	1	11/18/2016 7:02:22 PM	28728
Silver	ND	0.0015	0.0050		mg/L	1	11/18/2016 7:02:22 PM	28728
Zinc	0.012	0.0027	0.010		mg/L	1	11/30/2016 7:44:24 PM	28879

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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-32

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 2:15:00 PM

Lab ID: 1611072-005

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0040	0.00069	0.0050	J	mg/L	5	11/16/2016 8:47:25 PM	B38773
Lead	ND	0.00084	0.0025		mg/L	5	11/15/2016 6:36:29 PM	B38728
Selenium	0.0069	0.0011	0.0050		mg/L	5	11/16/2016 8:47:25 PM	B38773
Uranium	0.059	0.00026	0.0025	*	mg/L	5	11/15/2016 6:36:29 PM	B38728
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0044	0.0011	0.0050	J	mg/L	5	11/17/2016 6:16:14 PM	28728
Lead	0.0033	0.000081	0.00050		mg/L	1	11/17/2016 3:48:52 PM	28728
Selenium	0.0060	0.0037	0.020	J	mg/L	20	11/17/2016 6:19:14 PM	28728
Uranium	0.059	0.00087	0.0025	*	mg/L	5	11/17/2016 6:16:14 PM	28728
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 5:47:51 PM	28645
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Acenaphthylene	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Aniline	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Anthracene	ND	2.5	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Azobenzene	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Benzoic acid	8.7	2.6	20	J	µg/L	1	11/8/2016 1:04:33 PM	28471
Benzyl alcohol	ND	3.0	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Bis(2-ethylhexyl)phthalate	6.8	2.6	10	J	µg/L	1	11/8/2016 1:04:33 PM	28471
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Butyl benzyl phthalate	2.8	2.5	10	J	µg/L	1	11/8/2016 1:04:33 PM	28471
Carbazole	ND	2.3	10		µg/L	1	11/8/2016 1:04:33 PM	28471
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
4-Chloroaniline	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2-Chlorophenol	ND	2.2	10		µg/L	1	11/8/2016 1:04:33 PM	28471
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Chrysene	ND	2.8	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471

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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.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-32

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 2:15:00 PM

Lab ID: 1611072-005

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	7.6	2.0	10	J	µg/L	1	11/8/2016 1:04:33 PM	28471
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Dibenzofuran	ND	2.5	10		µg/L	1	11/8/2016 1:04:33 PM	28471
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 1:04:33 PM	28471
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 1:04:33 PM	28471
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Diethyl phthalate	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/8/2016 1:04:33 PM	28471
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/8/2016 1:04:33 PM	28471
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/8/2016 1:04:33 PM	28471
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/8/2016 1:04:33 PM	28471
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Fluoranthene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Fluorene	ND	2.7	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Hexachloroethane	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Isophorone	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2-Methylphenol	ND	2.5	10		µg/L	1	11/8/2016 1:04:33 PM	28471
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/8/2016 1:04:33 PM	28471
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/8/2016 1:04:33 PM	28471
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Naphthalene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2-Nitroaniline	ND	2.8	10		µg/L	1	11/8/2016 1:04:33 PM	28471
3-Nitroaniline	ND	2.9	10		µg/L	1	11/8/2016 1:04:33 PM	28471
4-Nitroaniline	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Nitrobenzene	ND	2.8	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2-Nitrophenol	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
4-Nitrophenol	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Pentachlorophenol	ND	2.3	20		µg/L	1	11/8/2016 1:04:33 PM	28471
Phenanthrene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-32

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 2:15:00 PM

Lab ID: 1611072-005

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	2.0	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Pyrene	ND	3.1	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Pyridine	ND	2.2	10		µg/L	1	11/8/2016 1:04:33 PM	28471
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/8/2016 1:04:33 PM	28471
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/8/2016 1:04:33 PM	28471
Surr: 2-Fluorophenol	44.8	0	15-98.1		%Rec	1	11/8/2016 1:04:33 PM	28471
Surr: Phenol-d5	36.4	0	15-80.7		%Rec	1	11/8/2016 1:04:33 PM	28471
Surr: 2,4,6-Tribromophenol	69.8	0	15-112		%Rec	1	11/8/2016 1:04:33 PM	28471
Surr: Nitrobenzene-d5	66.2	0	27.2-90.7		%Rec	1	11/8/2016 1:04:33 PM	28471
Surr: 2-Fluorobiphenyl	53.2	0	23.3-85.6		%Rec	1	11/8/2016 1:04:33 PM	28471
Surr: 4-Terphenyl-d14	59.7	0	27.6-107		%Rec	1	11/8/2016 1:04:33 PM	28471
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	0.49	0.096	1.0	J	µg/L	1	11/7/2016 5:01:22 PM	R38506
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Methyl tert-butyl ether (MTBE)	630	2.1	10		µg/L	10	11/7/2016 4:32:42 PM	R38506
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2-Dichloroethane (EDC)	20	0.12	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Acetone	ND	4.9	10		µg/L	1	11/7/2016 5:01:22 PM	R38506
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 5:01:22 PM	R38506
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 5:01:22 PM	R38506
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
cis-1,2-DCE	1.6	0.12	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506

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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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-32

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 2:15:00 PM

Lab ID: 1611072-005

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,1-Dichloroethane	15	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,1-Dichloroethene	30	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 5:01:22 PM	R38506
Isopropylbenzene	0.22	0.10	1.0	J	µg/L	1	11/7/2016 5:01:22 PM	R38506
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 5:01:22 PM	R38506
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
sec-Butylbenzene	0.86	0.12	1.0	J	µg/L	1	11/7/2016 5:01:22 PM	R38506
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,1,1-Trichloroethane	0.47	0.091	1.0	J	µg/L	1	11/7/2016 5:01:22 PM	R38506
1,1,2-Trichloroethane	1.6	0.13	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 5:01:22 PM	R38506
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 5:01:22 PM	R38506

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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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-32

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 2:15:00 PM

Lab ID: 1611072-005

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	96.3	0	70-130		%Rec	1	11/7/2016 5:01:22 PM	R38506
Surr: 4-Bromofluorobenzene	88.3	0	70-130		%Rec	1	11/7/2016 5:01:22 PM	R38506
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	11/7/2016 5:01:22 PM	R38506
Surr: Toluene-d8	106	0	70-130		%Rec	1	11/7/2016 5:01:22 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB103116

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 3:15:00 PM

Lab ID: 1611072-006

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 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	11/10/2016 2:09:40 PM	28583
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	11/3/2016 3:37:02 PM	28435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/3/2016 3:37:02 PM	28435
Surr: DNOP	112	0	77.1-144		%Rec	1	11/3/2016 3:37:02 PM	28435
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/8/2016 3:08:00 PM	G38528
Surr: BFB	86.7	0	66.4-120		%Rec	1	11/8/2016 3:08:00 PM	G38528
EPA METHOD 300.0: ANIONS								
							Analyst: LGT	
Fluoride	ND	0.050	0.10		mg/L	1	11/2/2016 2:27:56 PM	R38417
Chloride	0.12	0.051	0.50	J	mg/L	1	11/2/2016 2:27:56 PM	R38417
Bromide	ND	0.044	0.10		mg/L	1	11/2/2016 2:27:56 PM	R38417
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50		mg/L	1	11/2/2016 2:27:56 PM	R38417
Sulfate	ND	0.14	0.50		mg/L	1	11/2/2016 2:27:56 PM	R38417
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/9/2016 9:11:37 PM	R38595
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	ND	0.0013	0.0020		mg/L	1	11/28/2016 1:05:50 PM	A38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 1:05:50 PM	A38985
Calcium	ND	0.50	1.0		mg/L	1	11/28/2016 1:05:50 PM	A38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 1:05:50 PM	A38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 1:05:50 PM	A38985
Iron	ND	0.020	0.020		mg/L	1	11/28/2016 1:05:50 PM	A38985
Magnesium	ND	0.50	1.0		mg/L	1	11/28/2016 1:05:50 PM	A38985
Manganese	ND	0.00032	0.0020		mg/L	1	11/28/2016 1:05:50 PM	A38985
Potassium	ND	0.50	1.0		mg/L	1	11/28/2016 1:05:50 PM	A38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 1:05:50 PM	A38985
Sodium	1.1	0.50	1.0		mg/L	1	11/28/2016 1:05:50 PM	A38985
Zinc	ND	0.0028	0.010		mg/L	1	12/1/2016 4:09:46 PM	A39100
EPA METHOD 200.7: TOTAL METALS								
							Analyst: TES	
Barium	ND	0.00079	0.0020		mg/L	1	11/18/2016 7:08:09 PM	28728
Cadmium	ND	0.0015	0.0020		mg/L	1	11/18/2016 7:08:09 PM	28728
Chromium	ND	0.0027	0.0060		mg/L	1	11/18/2016 7:08:09 PM	28728
Copper	ND	0.0030	0.0060		mg/L	1	11/18/2016 7:08:09 PM	28728
Iron	ND	0.020	0.020		mg/L	1	11/18/2016 7:08:09 PM	28728
Manganese	ND	0.00027	0.0020		mg/L	1	11/18/2016 7:08:09 PM	28728
Silver	ND	0.0015	0.0050		mg/L	1	11/18/2016 7:08:09 PM	28728
Zinc	ND	0.0027	0.010		mg/L	1	11/18/2016 7:08:09 PM	28728

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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
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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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB103116

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 3:15:00 PM

Lab ID: 1611072-006

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	ND	0.00014	0.0010		mg/L	1	11/16/2016 9:13:10 PM	B38773
Lead	ND	0.00017	0.00050		mg/L	1	11/14/2016 9:20:34 PM	C38697
Selenium	ND	0.00021	0.0010		mg/L	1	11/15/2016 6:42:35 PM	B38728
Uranium	0.000074	0.000051	0.00050	J	mg/L	1	11/14/2016 9:20:34 PM	C38697
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	ND	0.00021	0.0010		mg/L	1	11/17/2016 3:51:52 PM	28728
Lead	ND	0.000081	0.00050		mg/L	1	11/17/2016 3:51:52 PM	28728
Selenium	ND	0.00019	0.0010		mg/L	1	11/17/2016 3:51:52 PM	28728
Uranium	ND	0.00017	0.00050		mg/L	1	11/17/2016 3:51:52 PM	28728
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 6:16:07 PM	28670
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Acenaphthylene	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Aniline	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Anthracene	ND	2.5	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Azobenzene	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Benzoic acid	12	2.6	20	J	µg/L	1	11/8/2016 1:32:29 PM	28471
Benzyl alcohol	ND	3.0	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Bis(2-ethylhexyl)phthalate	6.6	2.6	10	J	µg/L	1	11/8/2016 1:32:29 PM	28471
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Butyl benzyl phthalate	2.8	2.5	10	J	µg/L	1	11/8/2016 1:32:29 PM	28471
Carbazole	ND	2.3	10		µg/L	1	11/8/2016 1:32:29 PM	28471
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
4-Chloroaniline	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2-Chlorophenol	ND	2.2	10		µg/L	1	11/8/2016 1:32:29 PM	28471
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Chrysene	ND	2.8	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB103116

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 3:15:00 PM

Lab ID: 1611072-006

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	7.5	2.0	10	J	µg/L	1	11/8/2016 1:32:29 PM	28471
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Dibenzofuran	ND	2.5	10		µg/L	1	11/8/2016 1:32:29 PM	28471
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 1:32:29 PM	28471
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 1:32:29 PM	28471
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Diethyl phthalate	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/8/2016 1:32:29 PM	28471
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/8/2016 1:32:29 PM	28471
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/8/2016 1:32:29 PM	28471
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/8/2016 1:32:29 PM	28471
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Fluoranthene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Fluorene	ND	2.7	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Hexachloroethane	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Isophorone	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2-Methylphenol	ND	2.5	10		µg/L	1	11/8/2016 1:32:29 PM	28471
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/8/2016 1:32:29 PM	28471
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/8/2016 1:32:29 PM	28471
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Naphthalene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2-Nitroaniline	ND	2.8	10		µg/L	1	11/8/2016 1:32:29 PM	28471
3-Nitroaniline	ND	2.9	10		µg/L	1	11/8/2016 1:32:29 PM	28471
4-Nitroaniline	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Nitrobenzene	ND	2.8	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2-Nitrophenol	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
4-Nitrophenol	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Pentachlorophenol	ND	2.3	20		µg/L	1	11/8/2016 1:32:29 PM	28471
Phenanthrene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB103116

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 3:15:00 PM

Lab ID: 1611072-006

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	2.0	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Pyrene	ND	3.1	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Pyridine	ND	2.2	10		µg/L	1	11/8/2016 1:32:29 PM	28471
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/8/2016 1:32:29 PM	28471
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/8/2016 1:32:29 PM	28471
Surr: 2-Fluorophenol	47.0	0	15-98.1		%Rec	1	11/8/2016 1:32:29 PM	28471
Surr: Phenol-d5	34.0	0	15-80.7		%Rec	1	11/8/2016 1:32:29 PM	28471
Surr: 2,4,6-Tribromophenol	60.6	0	15-112		%Rec	1	11/8/2016 1:32:29 PM	28471
Surr: Nitrobenzene-d5	60.4	0	27.2-90.7		%Rec	1	11/8/2016 1:32:29 PM	28471
Surr: 2-Fluorobiphenyl	50.8	0	23.3-85.6		%Rec	1	11/8/2016 1:32:29 PM	28471
Surr: 4-Terphenyl-d14	58.5	0	27.6-107		%Rec	1	11/8/2016 1:32:29 PM	28471
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Toluene	0.25	0.12	1.0	J	µg/L	1	11/7/2016 1:29:25 PM	R38506
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Acetone	8.1	4.9	10	J	µg/L	1	11/7/2016 1:29:25 PM	R38506
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 1:29:25 PM	R38506
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 1:29:25 PM	R38506
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Chloroform	ND	0.089	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506

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Analytical Report

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Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB103116

Project: 2016 4th QTR (MKTF)

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 1:29:25 PM	R38506
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 1:29:25 PM	R38506
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 1:29:25 PM	R38506
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 1:29:25 PM	R38506

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Analytical Report

Lab Order 1611072

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CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB103116

Project: 2016 4th QTR (MKTF)

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Lab ID: 1611072-006

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	11/7/2016 1:29:25 PM	R38506
Surr: 4-Bromofluorobenzene	91.9	0	70-130		%Rec	1	11/7/2016 1:29:25 PM	R38506
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	11/7/2016 1:29:25 PM	R38506
Surr: Toluene-d8	102	0	70-130		%Rec	1	11/7/2016 1:29:25 PM	R38506

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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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-41

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 3:40:00 PM

Lab ID: 1611072-007

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 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	11/10/2016 2:24:44 PM	28583
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	11/3/2016 3:59:09 PM	28435
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/3/2016 3:59:09 PM	28435
Surr: DNOP	113	0	77.1-144		%Rec	1	11/3/2016 3:59:09 PM	28435
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/8/2016 3:32:31 PM	G38528
Surr: BFB	86.3	0	66.4-120		%Rec	1	11/8/2016 3:32:31 PM	G38528
EPA METHOD 300.0: ANIONS								
							Analyst: LGT	
Fluoride	0.26	0.050	0.10		mg/L	1	11/2/2016 2:52:46 PM	R38417
Chloride	730	5.1	50		mg/L	100	11/8/2016 5:46:13 PM	R38550
Bromide	5.4	0.87	2.0		mg/L	20	11/2/2016 3:05:10 PM	R38417
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50		mg/L	1	11/2/2016 2:52:46 PM	R38417
Sulfate	64	2.8	10		mg/L	20	11/2/2016 3:05:10 PM	R38417
Nitrate+Nitrite as N	5.4	0.46	1.0		mg/L	5	11/9/2016 9:24:02 PM	R38595
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.058	0.0013	0.0020		mg/L	1	11/28/2016 1:09:24 PM	A38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 1:09:24 PM	A38985
Calcium	12	0.50	1.0		mg/L	1	11/28/2016 1:09:24 PM	A38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 1:09:24 PM	A38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 1:09:24 PM	A38985
Iron	0.052	0.020	0.020		mg/L	1	11/28/2016 1:09:24 PM	A38985
Magnesium	1.6	0.50	1.0		mg/L	1	11/28/2016 1:09:24 PM	A38985
Manganese	0.0043	0.00032	0.0020		mg/L	1	11/28/2016 1:09:24 PM	A38985
Potassium	1.7	0.50	1.0		mg/L	1	11/28/2016 1:09:24 PM	A38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 1:09:24 PM	A38985
Sodium	650	5.0	10		mg/L	10	11/28/2016 7:48:39 PM	A38985
Zinc	ND	0.0028	0.010		mg/L	1	12/1/2016 4:11:24 PM	A39100
EPA METHOD 200.7: TOTAL METALS								
							Analyst: TES	
Barium	0.094	0.00079	0.0020		mg/L	1	11/18/2016 7:13:08 PM	28728
Cadmium	ND	0.0015	0.0020		mg/L	1	11/18/2016 7:13:08 PM	28728
Chromium	ND	0.0027	0.0060		mg/L	1	11/18/2016 7:13:08 PM	28728
Copper	ND	0.0030	0.0060		mg/L	1	11/18/2016 7:13:08 PM	28728
Iron	1.8	0.10	0.10	*	mg/L	5	11/18/2016 7:17:48 PM	28728
Manganese	0.088	0.00027	0.0020	*	mg/L	1	11/18/2016 7:13:08 PM	28728
Silver	ND	0.0015	0.0050		mg/L	1	11/18/2016 7:13:08 PM	28728
Zinc	0.011	0.0027	0.010		mg/L	1	11/30/2016 7:46:09 PM	28879

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 3:40:00 PM

Lab ID: 1611072-007

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0054	0.0028	0.020	J	mg/L	20	11/22/2016 1:26:38 PM	B38934
Lead	ND	0.00084	0.0025		mg/L	5	11/15/2016 6:45:39 PM	B38728
Selenium	0.050	0.0011	0.0050	*	mg/L	5	11/15/2016 6:45:39 PM	B38728
Uranium	0.013	0.00026	0.0025		mg/L	5	11/15/2016 6:45:39 PM	B38728
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0064	0.0042	0.020	J	mg/L	20	11/17/2016 6:31:19 PM	28728
Lead	0.0029	0.000081	0.00050		mg/L	1	11/17/2016 3:54:53 PM	28728
Selenium	0.045	0.00094	0.0050		mg/L	5	11/17/2016 6:28:18 PM	28728
Uranium	0.017	0.00017	0.00050		mg/L	1	11/17/2016 3:54:53 PM	28728
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/15/2016 6:18:07 PM	28670
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Acenaphthylene	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Aniline	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Anthracene	ND	2.5	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Azobenzene	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Benzoic acid	13	2.6	20	J	µg/L	1	11/8/2016 2:00:23 PM	28471
Benzyl alcohol	ND	3.0	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Bis(2-ethylhexyl)phthalate	6.5	2.6	10	J	µg/L	1	11/8/2016 2:00:23 PM	28471
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Carbazole	ND	2.3	10		µg/L	1	11/8/2016 2:00:23 PM	28471
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
4-Chloroaniline	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2-Chlorophenol	ND	2.2	10		µg/L	1	11/8/2016 2:00:23 PM	28471
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Chrysene	ND	2.8	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471

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Lab ID: 1611072-007

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	6.7	2.0	10	J	µg/L	1	11/8/2016 2:00:23 PM	28471
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Dibenzofuran	ND	2.5	10		µg/L	1	11/8/2016 2:00:23 PM	28471
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 2:00:23 PM	28471
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/8/2016 2:00:23 PM	28471
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Diethyl phthalate	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/8/2016 2:00:23 PM	28471
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/8/2016 2:00:23 PM	28471
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/8/2016 2:00:23 PM	28471
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/8/2016 2:00:23 PM	28471
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Fluoranthene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Fluorene	ND	2.7	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Hexachloroethane	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Isophorone	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2-Methylphenol	ND	2.5	10		µg/L	1	11/8/2016 2:00:23 PM	28471
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/8/2016 2:00:23 PM	28471
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/8/2016 2:00:23 PM	28471
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Naphthalene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2-Nitroaniline	ND	2.8	10		µg/L	1	11/8/2016 2:00:23 PM	28471
3-Nitroaniline	ND	2.9	10		µg/L	1	11/8/2016 2:00:23 PM	28471
4-Nitroaniline	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Nitrobenzene	ND	2.8	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2-Nitrophenol	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
4-Nitrophenol	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Pentachlorophenol	ND	2.3	20		µg/L	1	11/8/2016 2:00:23 PM	28471
Phenanthrene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471

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Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	2.0	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Pyrene	ND	3.1	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Pyridine	ND	2.2	10		µg/L	1	11/8/2016 2:00:23 PM	28471
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/8/2016 2:00:23 PM	28471
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/8/2016 2:00:23 PM	28471
Surr: 2-Fluorophenol	31.6	0	15-98.1		%Rec	1	11/8/2016 2:00:23 PM	28471
Surr: Phenol-d5	26.4	0	15-80.7		%Rec	1	11/8/2016 2:00:23 PM	28471
Surr: 2,4,6-Tribromophenol	57.9	0	15-112		%Rec	1	11/8/2016 2:00:23 PM	28471
Surr: Nitrobenzene-d5	66.4	0	27.2-90.7		%Rec	1	11/8/2016 2:00:23 PM	28471
Surr: 2-Fluorobiphenyl	50.3	0	23.3-85.6		%Rec	1	11/8/2016 2:00:23 PM	28471
Surr: 4-Terphenyl-d14	53.3	0	27.6-107		%Rec	1	11/8/2016 2:00:23 PM	28471
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Toluene	ND	0.12	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Methyl tert-butyl ether (MTBE)	0.91	0.21	1.0	J	µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2-Dichloroethane (EDC)	2.4	0.12	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Naphthalene	ND	0.093	2.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Acetone	ND	4.9	10		µg/L	1	11/7/2016 5:30:12 PM	R38506
Bromobenzene	ND	0.098	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Bromoform	ND	0.10	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Bromomethane	ND	0.78	3.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
2-Butanone	ND	0.74	10		µg/L	1	11/7/2016 5:30:12 PM	R38506
Carbon disulfide	ND	0.60	10		µg/L	1	11/7/2016 5:30:12 PM	R38506
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Chloroethane	ND	0.19	2.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Chloroform	0.14	0.089	1.0	J	µg/L	1	11/7/2016 5:30:12 PM	R38506
Chloromethane	ND	0.21	3.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Dibromomethane	ND	0.12	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,1-Dichloroethane	2.7	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,1-Dichloroethene	5.4	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
2-Hexanone	ND	0.84	10		µg/L	1	11/7/2016 5:30:12 PM	R38506
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/7/2016 5:30:12 PM	R38506
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Styrene	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,1,2-Trichloroethane	0.55	0.13	1.0	J	µg/L	1	11/7/2016 5:30:12 PM	R38506
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/7/2016 5:30:12 PM	R38506
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/7/2016 5:30:12 PM	R38506

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 1611072

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-41

Project: 2016 4th QTR (MKTF)

Collection Date: 10/31/2016 3:40:00 PM

Lab ID: 1611072-007

Matrix: AQUEOUS

Received Date: 11/1/2016 4:23:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	11/7/2016 5:30:12 PM	R38506
Surr: 4-Bromofluorobenzene	97.8	0	70-130		%Rec	1	11/7/2016 5:30:12 PM	R38506
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	11/7/2016 5:30:12 PM	R38506
Surr: Toluene-d8	102	0	70-130		%Rec	1	11/7/2016 5:30:12 PM	R38506

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