

AP - 111

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

2016

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-21

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 8:05:00 AM

Lab ID: 1611209-001

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	3.4	0.69	1.0		mg/L	1	11/8/2016 10:03:50 PM	28516
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/8/2016 10:03:50 PM	28516
Surr: DNOP	106	0	77.1-144		%Rec	1	11/8/2016 10:03:50 PM	28516
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	34	2.5	5.0		mg/L	100	11/9/2016 1:28:56 PM	G38568
Surr: BFB	87.3	0	66.4-120		%Rec	100	11/9/2016 1:28:56 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	0.91	0.25	0.50		mg/L	5	11/4/2016 3:44:17 PM	R38478
Chloride	110	1.0	10		mg/L	20	11/4/2016 3:56:42 PM	R38478
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 3:44:17 PM	R38478
Bromide	2.3	0.22	0.50		mg/L	5	11/4/2016 3:44:17 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 3:44:17 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 3:44:17 PM	R38478
Sulfate	3.9	0.71	2.5		mg/L	5	11/4/2016 3:44:17 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	4.3	0.0066	0.010	*	mg/L	5	11/28/2016 2:29:58 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 2:28:17 PM	B38985
Calcium	190	2.5	5.0		mg/L	5	11/28/2016 2:29:58 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 2:28:17 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 2:28:17 PM	B38985
Iron	30	1.0	1.0	*	mg/L	50	11/28/2016 7:53:58 PM	B38985
Magnesium	28	0.50	1.0		mg/L	1	11/28/2016 2:28:17 PM	B38985
Manganese	5.0	0.0016	0.010	*	mg/L	5	11/28/2016 2:29:58 PM	B38985
Potassium	21	0.50	1.0		mg/L	1	11/28/2016 2:28:17 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 2:28:17 PM	B38985
Sodium	110	2.5	5.0		mg/L	5	11/28/2016 2:29:58 PM	B38985
Zinc	0.017	0.0028	0.010		mg/L	1	11/28/2016 2:28:17 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	4.3	0.0079	0.020	*	mg/L	10	11/28/2016 9:29:33 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 3:23:30 PM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 3:23:30 PM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/19/2016 3:23:30 PM	28751
Iron	33	1.0	1.0	*	mg/L	50	11/28/2016 9:31:16 AM	28751
Manganese	5.1	0.0027	0.020	*	mg/L	10	11/28/2016 9:29:33 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 3:23:30 PM	28751
Zinc	0.057	0.0027	0.010		mg/L	1	11/19/2016 3:23:30 PM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.019	0.00069	0.0050	*	mg/L	5	11/22/2016 2:00:19 PM	B38934
Lead	0.00098	0.00017	0.00050		mg/L	1	11/18/2016 6:40:56 PM	A38851
Selenium	0.012	0.011	0.050	J	mg/L	50	11/22/2016 2:09:32 PM	B38934
Uranium	0.0020	0.000051	0.00050		mg/L	1	11/18/2016 6:40:56 PM	A38851
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.021	0.0011	0.0050	*	mg/L	5	11/21/2016 4:40:08 PM	28751
Lead	0.0033	0.000081	0.00050		mg/L	1	11/18/2016 3:26:55 PM	28751
Selenium	0.0086	0.0037	0.020	J	mg/L	20	11/21/2016 4:43:08 PM	28751
Uranium	0.0022	0.00017	0.00050		mg/L	1	11/18/2016 3:26:55 PM	28751
EPA METHOD 245.1: MERCURY							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 4:49:42 PM	28761
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Acenaphthylene	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Aniline	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Anthracene	ND	25	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Azobenzene	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Benz(a)anthracene	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Benzo(a)pyrene	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Benzo(b)fluoranthene	ND	29	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Benzo(g,h,i)perylene	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Benzo(k)fluoranthene	ND	30	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Benzoic acid	110	26	200	J	µg/L	1	11/9/2016 2:45:05 PM	28498
Benzyl alcohol	ND	30	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Bis(2-chloroethoxy)methane	ND	28	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Bis(2-chloroethyl)ether	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Bis(2-chloroisopropyl)ether	ND	19	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Bis(2-ethylhexyl)phthalate	64	26	100	J	µg/L	1	11/9/2016 2:45:05 PM	28498
4-Bromophenyl phenyl ether	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Butyl benzyl phthalate	27	25	100	J	µg/L	1	11/9/2016 2:45:05 PM	28498
Carbazole	ND	23	100		µg/L	1	11/9/2016 2:45:05 PM	28498
4-Chloro-3-methylphenol	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
4-Chloroaniline	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2-Chloronaphthalene	ND	23	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2-Chlorophenol	ND	22	100		µg/L	1	11/9/2016 2:45:05 PM	28498
4-Chlorophenyl phenyl ether	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Chrysene	ND	28	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Di-n-butyl phthalate	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498

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EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	81	20	100	J	µg/L	1	11/9/2016 2:45:05 PM	28498
Dibenz(a,h)anthracene	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Dibenzofuran	ND	25	100		µg/L	1	11/9/2016 2:45:05 PM	28498
1,2-Dichlorobenzene	ND	23	100		µg/L	1	11/9/2016 2:45:05 PM	28498
1,3-Dichlorobenzene	ND	23	100		µg/L	1	11/9/2016 2:45:05 PM	28498
1,4-Dichlorobenzene	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
3,3'-Dichlorobenzidine	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Diethyl phthalate	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Dimethyl phthalate	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2,4-Dichlorophenol	ND	23	200		µg/L	1	11/9/2016 2:45:05 PM	28498
2,4-Dimethylphenol	30	30	100	J	µg/L	1	11/9/2016 2:45:05 PM	28498
4,6-Dinitro-2-methylphenol	ND	18	200		µg/L	1	11/9/2016 2:45:05 PM	28498
2,4-Dinitrophenol	ND	28	200		µg/L	1	11/9/2016 2:45:05 PM	28498
2,4-Dinitrotoluene	ND	31	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2,6-Dinitrotoluene	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Fluoranthene	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Fluorene	ND	27	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Hexachlorobenzene	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Hexachlorobutadiene	ND	22	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Hexachlorocyclopentadiene	ND	23	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Hexachloroethane	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Indeno(1,2,3-cd)pyrene	ND	30	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Isophorone	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
1-Methylnaphthalene	ND	29	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2-Methylnaphthalene	ND	29	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2-Methylphenol	ND	25	100		µg/L	1	11/9/2016 2:45:05 PM	28498
3+4-Methylphenol	30	23	100	J	µg/L	1	11/9/2016 2:45:05 PM	28498
N-Nitrosodi-n-propylamine	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
N-Nitrosodimethylamine	ND	22	100		µg/L	1	11/9/2016 2:45:05 PM	28498
N-Nitrosodiphenylamine	ND	23	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Naphthalene	49	26	100	J	µg/L	1	11/9/2016 2:45:05 PM	28498
2-Nitroaniline	ND	28	100		µg/L	1	11/9/2016 2:45:05 PM	28498
3-Nitroaniline	ND	29	100		µg/L	1	11/9/2016 2:45:05 PM	28498
4-Nitroaniline	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Nitrobenzene	ND	28	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2-Nitrophenol	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
4-Nitrophenol	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Pentachlorophenol	ND	23	200		µg/L	1	11/9/2016 2:45:05 PM	28498
Phenanthrene	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498

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EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	30	20	100	J	µg/L	1	11/9/2016 2:45:05 PM	28498
Pyrene	ND	31	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Pyridine	ND	22	100		µg/L	1	11/9/2016 2:45:05 PM	28498
1,2,4-Trichlorobenzene	ND	26	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2,4,5-Trichlorophenol	ND	22	100		µg/L	1	11/9/2016 2:45:05 PM	28498
2,4,6-Trichlorophenol	ND	24	100		µg/L	1	11/9/2016 2:45:05 PM	28498
Surr: 2-Fluorophenol	19.4	0	15-98.1		%Rec	1	11/9/2016 2:45:05 PM	28498
Surr: Phenol-d5	15.1	0	15-80.7		%Rec	1	11/9/2016 2:45:05 PM	28498
Surr: 2,4,6-Tribromophenol	34.5	0	15-112		%Rec	1	11/9/2016 2:45:05 PM	28498
Surr: Nitrobenzene-d5	63.8	0	27.2-90.7		%Rec	1	11/9/2016 2:45:05 PM	28498
Surr: 2-Fluorobiphenyl	49.8	0	23.3-85.6		%Rec	1	11/9/2016 2:45:05 PM	28498
Surr: 4-Terphenyl-d14	42.4	0	27.6-107		%Rec	1	11/9/2016 2:45:05 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	7600	48	500		µg/L	500	11/9/2016 2:36:15 PM	R38566
Toluene	68	5.9	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Ethylbenzene	400	5.6	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Methyl tert-butyl ether (MTBE)	770	11	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2,4-Trimethylbenzene	230	5.5	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,3,5-Trimethylbenzene	96	5.8	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2-Dichloroethane (EDC)	ND	5.8	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2-Dibromoethane (EDB)	ND	5.6	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Naphthalene	47	4.6	100	J	µg/L	50	11/9/2016 3:05:12 PM	R38566
1-Methylnaphthalene	ND	10	200		µg/L	50	11/9/2016 3:05:12 PM	R38566
2-Methylnaphthalene	ND	7.9	200		µg/L	50	11/9/2016 3:05:12 PM	R38566
Acetone	ND	250	500		µg/L	50	11/9/2016 3:05:12 PM	R38566
Bromobenzene	ND	4.9	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Bromodichloromethane	ND	7.0	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Bromoform	ND	5.1	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Bromomethane	ND	39	150		µg/L	50	11/9/2016 3:05:12 PM	R38566
2-Butanone	ND	37	500		µg/L	50	11/9/2016 3:05:12 PM	R38566
Carbon disulfide	ND	30	500		µg/L	50	11/9/2016 3:05:12 PM	R38566
Carbon Tetrachloride	ND	5.4	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Chlorobenzene	ND	5.7	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Chloroethane	ND	9.6	100		µg/L	50	11/9/2016 3:05:12 PM	R38566
Chloroform	ND	4.4	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Chloromethane	ND	11	150		µg/L	50	11/9/2016 3:05:12 PM	R38566
2-Chlorotoluene	ND	20	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
4-Chlorotoluene	ND	6.4	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
cis-1,2-DCE	ND	6.2	50		µg/L	50	11/9/2016 3:05:12 PM	R38566

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EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	5.3	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2-Dibromo-3-chloropropane	ND	12	100		µg/L	50	11/9/2016 3:05:12 PM	R38566
Dibromochloromethane	ND	4.3	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Dibromomethane	ND	6.0	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2-Dichlorobenzene	ND	20	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,3-Dichlorobenzene	ND	7.2	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,4-Dichlorobenzene	ND	7.1	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Dichlorodifluoromethane	ND	18	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,1-Dichloroethane	ND	5.4	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,1-Dichloroethene	ND	5.4	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2-Dichloropropane	ND	5.5	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,3-Dichloropropane	ND	7.8	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
2,2-Dichloropropane	ND	8.3	100		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,1-Dichloropropene	ND	6.7	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Hexachlorobutadiene	ND	9.9	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
2-Hexanone	ND	42	500		µg/L	50	11/9/2016 3:05:12 PM	R38566
Isopropylbenzene	8.5	5.2	50	J	µg/L	50	11/9/2016 3:05:12 PM	R38566
4-Isopropyltoluene	ND	7.0	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
4-Methyl-2-pentanone	32	21	500	J	µg/L	50	11/9/2016 3:05:12 PM	R38566
Methylene Chloride	ND	9.4	150		µg/L	50	11/9/2016 3:05:12 PM	R38566
n-Butylbenzene	ND	8.0	150		µg/L	50	11/9/2016 3:05:12 PM	R38566
n-Propylbenzene	19	6.6	50	J	µg/L	50	11/9/2016 3:05:12 PM	R38566
sec-Butylbenzene	ND	6.2	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Styrene	ND	5.5	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
tert-Butylbenzene	ND	5.8	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,1,1,2-Tetrachloroethane	ND	5.6	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,1,2,2-Tetrachloroethane	ND	6.4	100		µg/L	50	11/9/2016 3:05:12 PM	R38566
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
trans-1,2-DCE	ND	20	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
trans-1,3-Dichloropropene	ND	5.2	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2,3-Trichlorobenzene	ND	5.6	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2,4-Trichlorobenzene	ND	6.6	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,1,1-Trichloroethane	ND	4.6	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,1,2-Trichloroethane	ND	6.4	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Trichloroethene (TCE)	ND	8.8	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Trichlorofluoromethane	ND	10	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
1,2,3-Trichloropropane	ND	10	100		µg/L	50	11/9/2016 3:05:12 PM	R38566
Vinyl chloride	ND	9.8	50		µg/L	50	11/9/2016 3:05:12 PM	R38566
Xylenes, Total	2300	18	75		µg/L	50	11/9/2016 3:05:12 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-21

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 8:05:00 AM

Lab ID: 1611209-001

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	97.6	0	70-130		%Rec	50	11/9/2016 3:05:12 PM	R38566
Surr: 4-Bromofluorobenzene	91.0	0	70-130		%Rec	50	11/9/2016 3:05:12 PM	R38566
Surr: Dibromofluoromethane	103	0	70-130		%Rec	50	11/9/2016 3:05:12 PM	R38566
Surr: Toluene-d8	104	0	70-130		%Rec	50	11/9/2016 3:05:12 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-20

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:00:00 AM

Lab ID: 1611209-002

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	9.4	0.69	1.0		mg/L	1	11/8/2016 10:25:30 PM	28516
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/8/2016 10:25:30 PM	28516
Surr: DNOP	108	0	77.1-144		%Rec	1	11/8/2016 10:25:30 PM	28516
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	65	5.1	10		mg/L	200	11/9/2016 1:53:26 PM	G38568
Surr: BFB	86.7	0	66.4-120		%Rec	200	11/9/2016 1:53:26 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	2.6	0.25	0.50		mg/L	5	11/4/2016 4:09:07 PM	R38478
Chloride	1500	5.1	50		mg/L	100	11/15/2016 5:47:18 PM	R38732
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 4:09:07 PM	R38478
Bromide	1.6	0.22	0.50		mg/L	5	11/4/2016 4:09:07 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 4:09:07 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 4:09:07 PM	R38478
Sulfate	13	0.71	2.5		mg/L	5	11/4/2016 4:09:07 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	8.6	0.013	0.020	*	mg/L	10	11/28/2016 8:01:16 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 2:31:36 PM	B38985
Calcium	480	5.0	10		mg/L	10	11/28/2016 8:01:16 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 2:31:36 PM	B38985
Copper	0.0073	0.0040	0.0060		mg/L	1	11/28/2016 2:31:36 PM	B38985
Iron	20	1.0	1.0	*	mg/L	50	11/28/2016 8:02:52 PM	B38985
Magnesium	92	0.50	1.0		mg/L	1	11/28/2016 2:31:36 PM	B38985
Manganese	8.0	0.0032	0.020	*	mg/L	10	11/28/2016 8:01:16 PM	B38985
Potassium	22	0.50	1.0		mg/L	1	11/28/2016 2:31:36 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 2:31:36 PM	B38985
Sodium	540	5.0	10		mg/L	10	11/28/2016 8:01:16 PM	B38985
Zinc	0.014	0.0028	0.010		mg/L	1	11/28/2016 2:31:36 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	9.3	0.0079	0.020	*	mg/L	10	11/28/2016 9:33:07 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 3:25:10 PM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 3:25:10 PM	28751
Copper	0.019	0.0030	0.0060		mg/L	1	11/19/2016 3:25:10 PM	28751
Iron	22	1.0	1.0	*	mg/L	50	11/28/2016 9:34:59 AM	28751
Manganese	8.9	0.0027	0.020	*	mg/L	10	11/28/2016 9:33:07 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 3:25:10 PM	28751
Zinc	0.024	0.0027	0.010		mg/L	1	11/19/2016 3:25:10 PM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-20

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:00:00 AM

Lab ID: 1611209-002

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.026	0.00069	0.0050	*	mg/L	5	11/22/2016 2:12:35 PM	B38934
Lead	0.0053	0.00084	0.0025		mg/L	5	11/22/2016 2:12:35 PM	B38934
Selenium	0.011	0.0011	0.0050		mg/L	5	11/22/2016 2:12:35 PM	B38934
Uranium	0.0052	0.00026	0.0025		mg/L	5	11/22/2016 2:12:35 PM	B38934
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.029	0.0011	0.0050	*	mg/L	5	11/21/2016 4:46:09 PM	28751
Lead	0.0090	0.00041	0.0025		mg/L	5	11/21/2016 4:46:09 PM	28751
Selenium	0.013	0.0037	0.020	J	mg/L	20	11/21/2016 4:49:09 PM	28751
Uranium	0.0052	0.00087	0.0025		mg/L	5	11/21/2016 4:46:09 PM	28751
EPA METHOD 245.1: MERCURY							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 4:51:31 PM	28761
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Acenaphthylene	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Aniline	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Anthracene	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Azobenzene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Benz(a)anthracene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Benzo(a)pyrene	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Benzo(b)fluoranthene	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Benzo(g,h,i)perylene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Benzo(k)fluoranthene	ND	15	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Benzoic acid	61	13	100	JD	µg/L	1	11/15/2016 5:07:17 PM	28584
Benzyl alcohol	ND	15	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Bis(2-chloroethoxy)methane	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Bis(2-chloroethyl)ether	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Bis(2-chloroisopropyl)ether	ND	9.5	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Bis(2-ethylhexyl)phthalate	35	13	50	JD	µg/L	1	11/15/2016 5:07:17 PM	28584
4-Bromophenyl phenyl ether	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Butyl benzyl phthalate	14	12	50	JD	µg/L	1	11/15/2016 5:07:17 PM	28584
Carbazole	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
4-Chloro-3-methylphenol	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
4-Chloroaniline	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2-Chloronaphthalene	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2-Chlorophenol	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
4-Chlorophenyl phenyl ether	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Chrysene	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Di-n-butyl phthalate	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-20

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:00:00 AM

Lab ID: 1611209-002

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	36	9.9	50	JD	µg/L	1	11/15/2016 5:07:17 PM	28584
Dibenz(a,h)anthracene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Dibenzofuran	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
1,2-Dichlorobenzene	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
1,3-Dichlorobenzene	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
1,4-Dichlorobenzene	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
3,3'-Dichlorobenzidine	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Diethyl phthalate	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Dimethyl phthalate	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2,4-Dichlorophenol	ND	12	100	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2,4-Dimethylphenol	430	15	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
4,6-Dinitro-2-methylphenol	ND	9.0	100	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2,4-Dinitrophenol	ND	14	100	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2,4-Dinitrotoluene	ND	16	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2,6-Dinitrotoluene	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Fluoranthene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Fluorene	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Hexachlorobenzene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Hexachlorobutadiene	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Hexachlorocyclopentadiene	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Hexachloroethane	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Indeno(1,2,3-cd)pyrene	ND	15	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Isophorone	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
1-Methylnaphthalene	50	15	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2-Methylnaphthalene	38	14	50	JD	µg/L	1	11/15/2016 5:07:17 PM	28584
2-Methylphenol	160	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
3+4-Methylphenol	89	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
N-Nitrosodi-n-propylamine	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
N-Nitrosodimethylamine	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
N-Nitrosodiphenylamine	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Naphthalene	110	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2-Nitroaniline	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
3-Nitroaniline	ND	15	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
4-Nitroaniline	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Nitrobenzene	ND	14	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2-Nitrophenol	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
4-Nitrophenol	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Pentachlorophenol	ND	12	100	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Phenanthrene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-20

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:00:00 AM

Lab ID: 1611209-002

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	130	9.9	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Pyrene	ND	15	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Pyridine	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
1,2,4-Trichlorobenzene	ND	13	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2,4,5-Trichlorophenol	ND	11	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
2,4,6-Trichlorophenol	ND	12	50	D	µg/L	1	11/15/2016 5:07:17 PM	28584
Surr: 2-Fluorophenol	11.4	0	15-98.1	SD	%Rec	1	11/15/2016 5:07:17 PM	28584
Surr: Phenol-d5	19.4	0	15-80.7	D	%Rec	1	11/15/2016 5:07:17 PM	28584
Surr: 2,4,6-Tribromophenol	52.8	0	15-112	D	%Rec	1	11/15/2016 5:07:17 PM	28584
Surr: Nitrobenzene-d5	69.2	0	27.2-90.7	D	%Rec	1	11/15/2016 5:07:17 PM	28584
Surr: 2-Fluorobiphenyl	52.6	0	23.3-85.6	D	%Rec	1	11/15/2016 5:07:17 PM	28584
Surr: 4-Terphenyl-d14	39.0	0	27.6-107	D	%Rec	1	11/15/2016 5:07:17 PM	28584
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	13000	96	1000		µg/L	1000	11/9/2016 3:33:50 PM	R38566
Toluene	400	12	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Ethylbenzene	1100	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Methyl tert-butyl ether (MTBE)	190	21	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2,4-Trimethylbenzene	1200	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,3,5-Trimethylbenzene	350	12	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2-Dichloroethane (EDC)	ND	12	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2-Dibromoethane (EDB)	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Naphthalene	190	9.3	200	J	µg/L	100	11/9/2016 4:02:28 PM	R38566
1-Methylnaphthalene	73	20	400	J	µg/L	100	11/9/2016 4:02:28 PM	R38566
2-Methylnaphthalene	79	16	400	J	µg/L	100	11/9/2016 4:02:28 PM	R38566
Acetone	ND	490	1000		µg/L	100	11/9/2016 4:02:28 PM	R38566
Bromobenzene	ND	9.8	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Bromodichloromethane	ND	14	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Bromoform	ND	10	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Bromomethane	ND	78	300		µg/L	100	11/9/2016 4:02:28 PM	R38566
2-Butanone	ND	74	1000		µg/L	100	11/9/2016 4:02:28 PM	R38566
Carbon disulfide	ND	60	1000		µg/L	100	11/9/2016 4:02:28 PM	R38566
Carbon Tetrachloride	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Chlorobenzene	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Chloroethane	ND	19	200		µg/L	100	11/9/2016 4:02:28 PM	R38566
Chloroform	ND	8.9	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Chloromethane	ND	21	300		µg/L	100	11/9/2016 4:02:28 PM	R38566
2-Chlorotoluene	ND	40	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
4-Chlorotoluene	ND	13	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
cis-1,2-DCE	ND	12	100		µg/L	100	11/9/2016 4:02:28 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-20

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:00:00 AM

Lab ID: 1611209-002

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2-Dibromo-3-chloropropane	ND	23	200		µg/L	100	11/9/2016 4:02:28 PM	R38566
Dibromochloromethane	ND	8.7	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Dibromomethane	ND	12	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2-Dichlorobenzene	ND	40	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,3-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,4-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Dichlorodifluoromethane	ND	36	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,1-Dichloroethane	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,1-Dichloroethene	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2-Dichloropropane	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,3-Dichloropropane	ND	16	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
2,2-Dichloropropane	ND	17	200		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,1-Dichloropropene	ND	13	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Hexachlorobutadiene	ND	20	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
2-Hexanone	ND	84	1000		µg/L	100	11/9/2016 4:02:28 PM	R38566
Isopropylbenzene	35	10	100	J	µg/L	100	11/9/2016 4:02:28 PM	R38566
4-Isopropyltoluene	ND	14	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
4-Methyl-2-pentanone	46	43	1000	J	µg/L	100	11/9/2016 4:02:28 PM	R38566
Methylene Chloride	ND	19	300		µg/L	100	11/9/2016 4:02:28 PM	R38566
n-Butylbenzene	ND	16	300		µg/L	100	11/9/2016 4:02:28 PM	R38566
n-Propylbenzene	110	13	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
sec-Butylbenzene	ND	12	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Styrene	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
tert-Butylbenzene	ND	12	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,1,1,2-Tetrachloroethane	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,1,2,2-Tetrachloroethane	ND	13	200		µg/L	100	11/9/2016 4:02:28 PM	R38566
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
trans-1,2-DCE	ND	40	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
trans-1,3-Dichloropropene	ND	10	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2,3-Trichlorobenzene	ND	11	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2,4-Trichlorobenzene	ND	13	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,1,1-Trichloroethane	ND	9.1	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,1,2-Trichloroethane	ND	13	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Trichloroethene (TCE)	ND	18	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Trichlorofluoromethane	ND	20	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
1,2,3-Trichloropropane	ND	20	200		µg/L	100	11/9/2016 4:02:28 PM	R38566
Vinyl chloride	ND	20	100		µg/L	100	11/9/2016 4:02:28 PM	R38566
Xylenes, Total	9200	37	150		µg/L	100	11/9/2016 4:02:28 PM	R38566

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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
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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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-20

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:00:00 AM

Lab ID: 1611209-002

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	95.6	0	70-130		%Rec	100	11/9/2016 4:02:28 PM	R38566
Surr: 4-Bromofluorobenzene	85.2	0	70-130		%Rec	100	11/9/2016 4:02:28 PM	R38566
Surr: Dibromofluoromethane	104	0	70-130		%Rec	100	11/9/2016 4:02:28 PM	R38566
Surr: Toluene-d8	102	0	70-130		%Rec	100	11/9/2016 4:02:28 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110316

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:35:00 AM

Lab ID: 1611209-003

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/8/2016 10:46:57 PM	28516
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/8/2016 10:46:57 PM	28516
Surr: DNOP	105	0	77.1-144		%Rec	1	11/8/2016 10:46:57 PM	28516
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/9/2016 2:17:51 PM	G38568
Surr: BFB	88.7	0	66.4-120		%Rec	1	11/9/2016 2:17:51 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	ND	0.050	0.10		mg/L	1	11/4/2016 4:33:57 PM	R38478
Chloride	ND	0.051	0.50		mg/L	1	11/4/2016 4:33:57 PM	R38478
Nitrogen, Nitrite (As N)	ND	0.052	0.10		mg/L	1	11/4/2016 4:33:57 PM	R38478
Bromide	ND	0.044	0.10		mg/L	1	11/4/2016 4:33:57 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.041	0.10		mg/L	1	11/4/2016 4:33:57 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50		mg/L	1	11/4/2016 4:33:57 PM	R38478
Sulfate	ND	0.14	0.50		mg/L	1	11/4/2016 4:33:57 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	ND	0.0013	0.0020		mg/L	1	11/28/2016 2:35:05 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 2:35:05 PM	B38985
Calcium	ND	0.50	1.0		mg/L	1	11/28/2016 2:35:05 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 2:35:05 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 2:35:05 PM	B38985
Iron	ND	0.020	0.020		mg/L	1	11/28/2016 2:35:05 PM	B38985
Magnesium	ND	0.50	1.0		mg/L	1	11/28/2016 2:35:05 PM	B38985
Manganese	ND	0.00032	0.0020		mg/L	1	11/28/2016 2:35:05 PM	B38985
Potassium	ND	0.50	1.0		mg/L	1	11/28/2016 2:35:05 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 2:35:05 PM	B38985
Sodium	ND	0.50	1.0		mg/L	1	11/28/2016 2:35:05 PM	B38985
Zinc	ND	0.0028	0.010		mg/L	1	11/28/2016 2:35:05 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	ND	0.00079	0.0020		mg/L	1	11/19/2016 3:26:51 PM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 3:26:51 PM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 3:26:51 PM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/19/2016 3:26:51 PM	28751
Iron	ND	0.020	0.020		mg/L	1	11/19/2016 3:26:51 PM	28751
Manganese	ND	0.00027	0.0020		mg/L	1	11/19/2016 3:26:51 PM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 3:26:51 PM	28751
Zinc	ND	0.0027	0.010		mg/L	1	11/19/2016 3:26:51 PM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110316

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:35:00 AM

Lab ID: 1611209-003

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/18/2016 6:47:03 PM	A38851
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 6:47:03 PM	A38851
Selenium	ND	0.00021	0.0010		mg/L	1	11/18/2016 6:47:03 PM	A38851
Uranium	ND	0.000051	0.00050		mg/L	1	11/18/2016 6:47:03 PM	A38851
200.8 ICPMS METALS:TOTAL								Analyst: JLF
Arsenic	ND	0.00021	0.0010		mg/L	1	11/18/2016 3:32:56 PM	28751
Lead	ND	0.000081	0.00050		mg/L	1	11/18/2016 3:32:56 PM	28751
Selenium	ND	0.00019	0.0010		mg/L	1	11/18/2016 3:32:56 PM	28751
Uranium	ND	0.00017	0.00050		mg/L	1	11/18/2016 3:32:56 PM	28751
EPA METHOD 245.1: MERCURY								Analyst: JLF
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 4:53:20 PM	28761
EPA METHOD 8270C: SEMIVOLATILES								Analyst: DAM
Acenaphthene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Aniline	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Benzoic acid	9.2	2.6	20	J	µg/L	1	11/9/2016 3:40:31 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Bis(2-ethylhexyl)phthalate	6.8	2.6	10	J	µg/L	1	11/9/2016 3:40:31 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Butyl benzyl phthalate	2.8	2.5	10	J	µg/L	1	11/9/2016 3:40:31 PM	28498
Carbazole	ND	2.3	10		µg/L	1	11/9/2016 3:40:31 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 3:40:31 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	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: FB110316

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:35:00 AM

Lab ID: 1611209-003

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	7.2	2.0	10	J	µg/L	1	11/9/2016 3:40:31 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 3:40:31 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 3:40:31 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 3:40:31 PM	28498
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 3:40:31 PM	28498
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/9/2016 3:40:31 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 3:40:31 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 3:40:31 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Fluorene	ND	2.7	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2-Methylphenol	ND	2.5	10		µg/L	1	11/9/2016 3:40:31 PM	28498
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/9/2016 3:40:31 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 3:40:31 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Naphthalene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 3:40:31 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 3:40:31 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 3:40:31 PM	28498
Phenanthrene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498

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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110316

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:35:00 AM

Lab ID: 1611209-003

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/9/2016 3:40:31 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 3:40:31 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 3:40:31 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 3:40:31 PM	28498
Surr: 2-Fluorophenol	25.1	0	15-98.1		%Rec	1	11/9/2016 3:40:31 PM	28498
Surr: Phenol-d5	22.4	0	15-80.7		%Rec	1	11/9/2016 3:40:31 PM	28498
Surr: 2,4,6-Tribromophenol	37.9	0	15-112		%Rec	1	11/9/2016 3:40:31 PM	28498
Surr: Nitrobenzene-d5	72.2	0	27.2-90.7		%Rec	1	11/9/2016 3:40:31 PM	28498
Surr: 2-Fluorobiphenyl	68.6	0	23.3-85.6		%Rec	1	11/9/2016 3:40:31 PM	28498
Surr: 4-Terphenyl-d14	54.6	0	27.6-107		%Rec	1	11/9/2016 3:40:31 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Toluene	0.14	0.12	1.0	J	µg/L	1	11/9/2016 1:38:25 PM	R38566
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Naphthalene	ND	0.093	2.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Acetone	ND	4.9	10		µg/L	1	11/9/2016 1:38:25 PM	R38566
Bromobenzene	ND	0.098	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Bromoform	ND	0.10	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Bromomethane	ND	0.78	3.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
2-Butanone	ND	0.74	10		µg/L	1	11/9/2016 1:38:25 PM	R38566
Carbon disulfide	ND	0.60	10		µg/L	1	11/9/2016 1:38:25 PM	R38566
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Chloroethane	ND	0.19	2.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Chloroform	ND	0.089	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Chloromethane	ND	0.21	3.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566

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: FB110316

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 9:35:00 AM

Lab ID: 1611209-003

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/9/2016 1:38:25 PM	R38566
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Dibromomethane	ND	0.12	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
2-Hexanone	ND	0.84	10		µg/L	1	11/9/2016 1:38:25 PM	R38566
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
4-Methyl-2-pentanone	0.48	0.43	10	J	µg/L	1	11/9/2016 1:38:25 PM	R38566
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Styrene	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/9/2016 1:38:25 PM	R38566
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/9/2016 1:38:25 PM	R38566

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:** FB110316**Project:** 2016 4th QTR (MKTF)**Collection Date:** 11/3/2016 9:35:00 AM**Lab ID:** 1611209-003**Matrix:** AQUEOUS**Received Date:** 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	94.9	0	70-130		%Rec	1	11/9/2016 1:38:25 PM	R38566
Surr: 4-Bromofluorobenzene	93.6	0	70-130		%Rec	1	11/9/2016 1:38:25 PM	R38566
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	11/9/2016 1:38:25 PM	R38566
Surr: Toluene-d8	99.1	0	70-130		%Rec	1	11/9/2016 1:38:25 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-16

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 10:10:00 AM

Lab ID: 1611209-004

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	3.3	0.69	1.0		mg/L	1	11/8/2016 11:08:33 PM	28516
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/8/2016 11:08:33 PM	28516
Surr: DNOP	106	0	77.1-144		%Rec	1	11/8/2016 11:08:33 PM	28516
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	70	5.1	10		mg/L	200	11/9/2016 2:42:11 PM	G38568
Surr: BFB	87.2	0	66.4-120		%Rec	200	11/9/2016 2:42:11 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	1.2	0.25	0.50		mg/L	5	11/4/2016 5:23:35 PM	R38478
Chloride	380	1.0	10		mg/L	20	11/4/2016 5:36:00 PM	R38478
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 5:23:35 PM	R38478
Bromide	2.3	0.22	0.50		mg/L	5	11/4/2016 5:23:35 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 5:23:35 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 5:23:35 PM	R38478
Sulfate	ND	0.71	2.5		mg/L	5	11/4/2016 5:23:35 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.69	0.0013	0.0020		mg/L	1	11/28/2016 2:45:56 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 2:45:56 PM	B38985
Calcium	46	0.50	1.0		mg/L	1	11/28/2016 2:45:56 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 2:45:56 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 2:45:56 PM	B38985
Iron	2.2	0.10	0.10	*	mg/L	5	11/28/2016 2:47:41 PM	B38985
Magnesium	13	0.50	1.0		mg/L	1	11/28/2016 2:45:56 PM	B38985
Manganese	0.87	0.00032	0.0020	*	mg/L	1	11/28/2016 2:45:56 PM	B38985
Potassium	0.93	0.50	1.0	J	mg/L	1	11/28/2016 2:45:56 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 2:45:56 PM	B38985
Sodium	630	5.0	10		mg/L	10	11/28/2016 8:04:43 PM	B38985
Zinc	0.0041	0.0028	0.010	J	mg/L	1	11/28/2016 2:45:56 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.67	0.00079	0.0020		mg/L	1	11/19/2016 3:28:55 PM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 3:28:55 PM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 3:28:55 PM	28751
Copper	0.0038	0.0030	0.0060	J	mg/L	1	11/19/2016 3:28:55 PM	28751
Iron	3.6	0.10	0.10	*	mg/L	5	11/28/2016 9:36:55 AM	28751
Manganese	0.86	0.00027	0.0020	*	mg/L	1	11/19/2016 3:28:55 PM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 3:28:55 PM	28751
Zinc	0.020	0.0027	0.010		mg/L	1	11/19/2016 3:28:55 PM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-16

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 10:10:00 AM

Lab ID: 1611209-004

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.015	0.00069	0.0050	*	mg/L	5	11/22/2016 2:18:42 PM	B38934
Lead	0.00042	0.00017	0.00050	J	mg/L	1	11/18/2016 6:50:06 PM	A38851
Selenium	0.013	0.0042	0.020	J	mg/L	20	11/22/2016 2:21:45 PM	B38934
Uranium	0.0053	0.000051	0.00050		mg/L	1	11/18/2016 6:50:06 PM	A38851
200.8 ICPMS METALS:TOTAL								
							Analyst: JLF	
Arsenic	0.015	0.0011	0.0050	*	mg/L	5	11/21/2016 4:52:10 PM	28751
Lead	0.0034	0.000081	0.00050		mg/L	1	11/18/2016 3:42:01 PM	28751
Selenium	0.010	0.0037	0.020	J	mg/L	20	11/21/2016 4:55:10 PM	28751
Uranium	0.0077	0.00017	0.00050		mg/L	1	11/18/2016 3:42:01 PM	28751
EPA METHOD 245.1: MERCURY								
							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 4:58:50 PM	28761
EPA METHOD 8270C: SEMIVOLATILES								
							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Aniline	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Benzoic acid	38	2.6	20		µg/L	1	11/9/2016 4:08:11 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Bis(2-ethylhexyl)phthalate	6.9	2.6	10	J	µg/L	1	11/9/2016 4:08:11 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/9/2016 4:08:11 PM	28498
Carbazole	3.5	2.3	10	J	µg/L	1	11/9/2016 4:08:11 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 4:08:11 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498

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-16

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 10:10:00 AM

Lab ID: 1611209-004

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	7.4	2.0	10	J	µg/L	1	11/9/2016 4:08:11 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 4:08:11 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 4:08:11 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 4:08:11 PM	28498
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 4:08:11 PM	28498
2,4-Dimethylphenol	59	3.0	10		µg/L	1	11/9/2016 4:08:11 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 4:08:11 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 4:08:11 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Fluorene	3.5	2.7	10	J	µg/L	1	11/9/2016 4:08:11 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
1-Methylnaphthalene	40	2.9	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2-Methylnaphthalene	37	2.9	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2-Methylphenol	26	2.5	10		µg/L	1	11/9/2016 4:08:11 PM	28498
3+4-Methylphenol	3.0	2.3	10	J	µg/L	1	11/9/2016 4:08:11 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 4:08:11 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Naphthalene	130	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 4:08:11 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 4:08:11 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 4:08:11 PM	28498
Phenanthrene	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-16

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 10:10:00 AM

Lab ID: 1611209-004

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	180	2.0	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 4:08:11 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 4:08:11 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 4:08:11 PM	28498
Surr: 2-Fluorophenol	22.0	0	15-98.1		%Rec	1	11/9/2016 4:08:11 PM	28498
Surr: Phenol-d5	20.3	0	15-80.7		%Rec	1	11/9/2016 4:08:11 PM	28498
Surr: 2,4,6-Tribromophenol	48.2	0	15-112		%Rec	1	11/9/2016 4:08:11 PM	28498
Surr: Nitrobenzene-d5	77.5	0	27.2-90.7		%Rec	1	11/9/2016 4:08:11 PM	28498
Surr: 2-Fluorobiphenyl	61.3	0	23.3-85.6		%Rec	1	11/9/2016 4:08:11 PM	28498
Surr: 4-Terphenyl-d14	49.5	0	27.6-107		%Rec	1	11/9/2016 4:08:11 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	19000	96	1000		µg/L	1000	11/9/2016 4:31:09 PM	R38566
Toluene	220	12	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Ethylbenzene	880	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Methyl tert-butyl ether (MTBE)	970	21	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2,4-Trimethylbenzene	560	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,3,5-Trimethylbenzene	210	12	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2-Dichloroethane (EDC)	ND	12	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2-Dibromoethane (EDB)	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Naphthalene	170	9.3	200	J	µg/L	100	11/9/2016 4:59:59 PM	R38566
1-Methylnaphthalene	56	20	400	J	µg/L	100	11/9/2016 4:59:59 PM	R38566
2-Methylnaphthalene	57	16	400	J	µg/L	100	11/9/2016 4:59:59 PM	R38566
Acetone	ND	490	1000		µg/L	100	11/9/2016 4:59:59 PM	R38566
Bromobenzene	ND	9.8	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Bromodichloromethane	ND	14	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Bromoform	ND	10	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Bromomethane	ND	78	300		µg/L	100	11/9/2016 4:59:59 PM	R38566
2-Butanone	ND	74	1000		µg/L	100	11/9/2016 4:59:59 PM	R38566
Carbon disulfide	ND	60	1000		µg/L	100	11/9/2016 4:59:59 PM	R38566
Carbon Tetrachloride	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Chlorobenzene	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Chloroethane	ND	19	200		µg/L	100	11/9/2016 4:59:59 PM	R38566
Chloroform	ND	8.9	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Chloromethane	ND	21	300		µg/L	100	11/9/2016 4:59:59 PM	R38566
2-Chlorotoluene	ND	40	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
4-Chlorotoluene	ND	13	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
cis-1,2-DCE	ND	12	100		µg/L	100	11/9/2016 4:59:59 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-16

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 10:10:00 AM

Lab ID: 1611209-004

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2-Dibromo-3-chloropropane	ND	23	200		µg/L	100	11/9/2016 4:59:59 PM	R38566
Dibromochloromethane	ND	8.7	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Dibromomethane	ND	12	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2-Dichlorobenzene	ND	40	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,3-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,4-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Dichlorodifluoromethane	ND	36	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,1-Dichloroethane	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,1-Dichloroethene	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2-Dichloropropane	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,3-Dichloropropane	ND	16	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
2,2-Dichloropropane	ND	17	200		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,1-Dichloropropene	ND	13	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Hexachlorobutadiene	ND	20	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
2-Hexanone	ND	84	1000		µg/L	100	11/9/2016 4:59:59 PM	R38566
Isopropylbenzene	15	10	100	J	µg/L	100	11/9/2016 4:59:59 PM	R38566
4-Isopropyltoluene	ND	14	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
4-Methyl-2-pentanone	ND	43	1000		µg/L	100	11/9/2016 4:59:59 PM	R38566
Methylene Chloride	ND	19	300		µg/L	100	11/9/2016 4:59:59 PM	R38566
n-Butylbenzene	ND	16	300		µg/L	100	11/9/2016 4:59:59 PM	R38566
n-Propylbenzene	52	13	100	J	µg/L	100	11/9/2016 4:59:59 PM	R38566
sec-Butylbenzene	ND	12	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Styrene	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
tert-Butylbenzene	ND	12	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,1,1,2-Tetrachloroethane	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,1,2,2-Tetrachloroethane	ND	13	200		µg/L	100	11/9/2016 4:59:59 PM	R38566
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
trans-1,2-DCE	ND	40	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
trans-1,3-Dichloropropene	ND	10	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2,3-Trichlorobenzene	ND	11	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2,4-Trichlorobenzene	ND	13	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,1,1-Trichloroethane	ND	9.1	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,1,2-Trichloroethane	ND	13	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Trichloroethene (TCE)	ND	18	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Trichlorofluoromethane	ND	20	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
1,2,3-Trichloropropane	ND	20	200		µg/L	100	11/9/2016 4:59:59 PM	R38566
Vinyl chloride	ND	20	100		µg/L	100	11/9/2016 4:59:59 PM	R38566
Xylenes, Total	3400	37	150		µg/L	100	11/9/2016 4:59:59 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-16

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016 10:10:00 AM

Lab ID: 1611209-004

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	99.0	0	70-130		%Rec	100	11/9/2016 4:59:59 PM	R38566
Surr: 4-Bromofluorobenzene	92.1	0	70-130		%Rec	100	11/9/2016 4:59:59 PM	R38566
Surr: Dibromofluoromethane	104	0	70-130		%Rec	100	11/9/2016 4:59:59 PM	R38566
Surr: Toluene-d8	98.8	0	70-130		%Rec	100	11/9/2016 4:59:59 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP05

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016

Lab ID: 1611209-005

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	9.6	0.69	1.0		mg/L	1	11/8/2016 11:30:00 PM	28516
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/8/2016 11:30:00 PM	28516
Surr: DNOP	108	0	77.1-144		%Rec	1	11/8/2016 11:30:00 PM	28516
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	68	5.1	10		mg/L	200	11/9/2016 3:06:27 PM	G38568
Surr: BFB	88.9	0	66.4-120		%Rec	200	11/9/2016 3:06:27 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	2.6	0.25	0.50		mg/L	5	11/4/2016 5:48:25 PM	R38478
Chloride	1600	10	100		mg/L	200	11/15/2016 5:59:43 PM	R38732
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 5:48:25 PM	R38478
Bromide	1.8	0.22	0.50		mg/L	5	11/4/2016 5:48:25 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 5:48:25 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 5:48:25 PM	R38478
Sulfate	12	0.71	2.5		mg/L	5	11/4/2016 5:48:25 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	9.6	0.013	0.020	*	mg/L	10	11/28/2016 8:06:32 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 2:49:39 PM	B38985
Calcium	570	5.0	10		mg/L	10	11/28/2016 8:06:32 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 2:49:39 PM	B38985
Copper	0.010	0.0040	0.0060		mg/L	1	11/28/2016 2:49:39 PM	B38985
Iron	25	1.0	1.0	*	mg/L	50	11/28/2016 8:08:16 PM	B38985
Magnesium	110	2.5	5.0		mg/L	5	11/28/2016 2:51:33 PM	B38985
Manganese	9.7	0.0032	0.020	*	mg/L	10	11/28/2016 8:06:32 PM	B38985
Potassium	23	0.50	1.0		mg/L	1	11/28/2016 2:49:39 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 2:49:39 PM	B38985
Sodium	620	5.0	10		mg/L	10	11/28/2016 8:06:32 PM	B38985
Zinc	0.017	0.0028	0.010		mg/L	1	11/28/2016 2:49:39 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	10	0.040	0.10	*	mg/L	50	11/28/2016 10:05:28 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/19/2016 3:30:46 PM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/19/2016 3:30:46 PM	28751
Copper	0.021	0.0030	0.0060		mg/L	1	11/19/2016 3:30:46 PM	28751
Iron	23	1.0	1.0	*	mg/L	50	11/28/2016 10:05:28 AM	28751
Manganese	9.5	0.014	0.10	*	mg/L	50	11/28/2016 10:05:28 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/19/2016 3:30:46 PM	28751
Zinc	0.026	0.0027	0.010		mg/L	1	11/19/2016 3:30:46 PM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP05

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016

Lab ID: 1611209-005

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.027	0.00069	0.0050	*	mg/L	5	11/22/2016 2:24:50 PM	B38934
Lead	0.0068	0.00084	0.0025		mg/L	5	11/22/2016 2:24:50 PM	B38934
Selenium	0.012	0.0011	0.0050		mg/L	5	11/22/2016 2:24:50 PM	B38934
Uranium	0.0047	0.00026	0.0025		mg/L	5	11/22/2016 2:24:50 PM	B38934
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.028	0.0011	0.0050	*	mg/L	5	11/21/2016 4:58:10 PM	28751
Lead	0.010	0.000081	0.00050		mg/L	1	11/18/2016 3:45:01 PM	28751
Selenium	0.010	0.0037	0.020	J	mg/L	20	11/21/2016 5:01:11 PM	28751
Uranium	0.0065	0.00017	0.00050		mg/L	1	11/18/2016 3:45:01 PM	28751
EPA METHOD 245.1: MERCURY							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 4:57:00 PM	28761
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Acenaphthylene	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Aniline	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Anthracene	ND	25	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Azobenzene	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Benz(a)anthracene	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Benzo(a)pyrene	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Benzo(b)fluoranthene	ND	29	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Benzo(g,h,i)perylene	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Benzo(k)fluoranthene	ND	30	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Benzoic acid	120	26	200	J	µg/L	1	11/9/2016 4:35:48 PM	28498
Benzyl alcohol	ND	30	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Bis(2-chloroethoxy)methane	ND	28	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Bis(2-chloroethyl)ether	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Bis(2-chloroisopropyl)ether	ND	19	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Bis(2-ethylhexyl)phthalate	65	26	100	J	µg/L	1	11/9/2016 4:35:48 PM	28498
4-Bromophenyl phenyl ether	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Butyl benzyl phthalate	26	25	100	J	µg/L	1	11/9/2016 4:35:48 PM	28498
Carbazole	ND	23	100		µg/L	1	11/9/2016 4:35:48 PM	28498
4-Chloro-3-methylphenol	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
4-Chloroaniline	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2-Chloronaphthalene	ND	23	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2-Chlorophenol	ND	22	100		µg/L	1	11/9/2016 4:35:48 PM	28498
4-Chlorophenyl phenyl ether	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Chrysene	ND	28	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Di-n-butyl phthalate	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP05

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016

Lab ID: 1611209-005

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	69	20	100	J	µg/L	1	11/9/2016 4:35:48 PM	28498
Dibenz(a,h)anthracene	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Dibenzofuran	ND	25	100		µg/L	1	11/9/2016 4:35:48 PM	28498
1,2-Dichlorobenzene	ND	23	100		µg/L	1	11/9/2016 4:35:48 PM	28498
1,3-Dichlorobenzene	ND	23	100		µg/L	1	11/9/2016 4:35:48 PM	28498
1,4-Dichlorobenzene	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
3,3'-Dichlorobenzidine	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Diethyl phthalate	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Dimethyl phthalate	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2,4-Dichlorophenol	ND	23	200		µg/L	1	11/9/2016 4:35:48 PM	28498
2,4-Dimethylphenol	540	30	100		µg/L	1	11/9/2016 4:35:48 PM	28498
4,6-Dinitro-2-methylphenol	ND	18	200		µg/L	1	11/9/2016 4:35:48 PM	28498
2,4-Dinitrophenol	ND	28	200		µg/L	1	11/9/2016 4:35:48 PM	28498
2,4-Dinitrotoluene	ND	31	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2,6-Dinitrotoluene	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Fluoranthene	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Fluorene	ND	27	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Hexachlorobenzene	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Hexachlorobutadiene	ND	22	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Hexachlorocyclopentadiene	ND	23	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Hexachloroethane	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Indeno(1,2,3-cd)pyrene	ND	30	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Isophorone	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
1-Methylnaphthalene	54	29	100	J	µg/L	1	11/9/2016 4:35:48 PM	28498
2-Methylnaphthalene	42	29	100	J	µg/L	1	11/9/2016 4:35:48 PM	28498
2-Methylphenol	190	25	100		µg/L	1	11/9/2016 4:35:48 PM	28498
3+4-Methylphenol	110	23	100		µg/L	1	11/9/2016 4:35:48 PM	28498
N-Nitrosodi-n-propylamine	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
N-Nitrosodimethylamine	ND	22	100		µg/L	1	11/9/2016 4:35:48 PM	28498
N-Nitrosodiphenylamine	ND	23	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Naphthalene	130	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2-Nitroaniline	ND	28	100		µg/L	1	11/9/2016 4:35:48 PM	28498
3-Nitroaniline	ND	29	100		µg/L	1	11/9/2016 4:35:48 PM	28498
4-Nitroaniline	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Nitrobenzene	ND	28	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2-Nitrophenol	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
4-Nitrophenol	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Pentachlorophenol	ND	23	200		µg/L	1	11/9/2016 4:35:48 PM	28498
Phenanthrene	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP05

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016

Lab ID: 1611209-005

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	170	20	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Pyrene	ND	31	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Pyridine	ND	22	100		µg/L	1	11/9/2016 4:35:48 PM	28498
1,2,4-Trichlorobenzene	ND	26	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2,4,5-Trichlorophenol	ND	22	100		µg/L	1	11/9/2016 4:35:48 PM	28498
2,4,6-Trichlorophenol	ND	24	100		µg/L	1	11/9/2016 4:35:48 PM	28498
Surr: 2-Fluorophenol	19.1	0	15-98.1		%Rec	1	11/9/2016 4:35:48 PM	28498
Surr: Phenol-d5	21.9	0	15-80.7		%Rec	1	11/9/2016 4:35:48 PM	28498
Surr: 2,4,6-Tribromophenol	35.4	0	15-112		%Rec	1	11/9/2016 4:35:48 PM	28498
Surr: Nitrobenzene-d5	73.5	0	27.2-90.7		%Rec	1	11/9/2016 4:35:48 PM	28498
Surr: 2-Fluorobiphenyl	47.9	0	23.3-85.6		%Rec	1	11/9/2016 4:35:48 PM	28498
Surr: 4-Terphenyl-d14	47.8	0	27.6-107		%Rec	1	11/9/2016 4:35:48 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	13000	96	1000		µg/L	1000	11/9/2016 5:28:39 PM	R38566
Toluene	400	12	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Ethylbenzene	1100	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Methyl tert-butyl ether (MTBE)	200	21	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2,4-Trimethylbenzene	1200	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,3,5-Trimethylbenzene	350	12	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2-Dichloroethane (EDC)	ND	12	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2-Dibromoethane (EDB)	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Naphthalene	190	9.3	200	J	µg/L	100	11/9/2016 5:57:27 PM	R38566
1-Methylnaphthalene	69	20	400	J	µg/L	100	11/9/2016 5:57:27 PM	R38566
2-Methylnaphthalene	75	16	400	J	µg/L	100	11/9/2016 5:57:27 PM	R38566
Acetone	ND	490	1000		µg/L	100	11/9/2016 5:57:27 PM	R38566
Bromobenzene	ND	9.8	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Bromodichloromethane	ND	14	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Bromoform	ND	10	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Bromomethane	ND	78	300		µg/L	100	11/9/2016 5:57:27 PM	R38566
2-Butanone	ND	74	1000		µg/L	100	11/9/2016 5:57:27 PM	R38566
Carbon disulfide	ND	60	1000		µg/L	100	11/9/2016 5:57:27 PM	R38566
Carbon Tetrachloride	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Chlorobenzene	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Chloroethane	ND	19	200		µg/L	100	11/9/2016 5:57:27 PM	R38566
Chloroform	ND	8.9	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Chloromethane	ND	21	300		µg/L	100	11/9/2016 5:57:27 PM	R38566
2-Chlorotoluene	ND	40	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
4-Chlorotoluene	ND	13	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
cis-1,2-DCE	ND	12	100		µg/L	100	11/9/2016 5:57:27 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP05

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016

Lab ID: 1611209-005

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2-Dibromo-3-chloropropane	ND	23	200		µg/L	100	11/9/2016 5:57:27 PM	R38566
Dibromochloromethane	ND	8.7	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Dibromomethane	ND	12	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2-Dichlorobenzene	ND	40	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,3-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,4-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Dichlorodifluoromethane	ND	36	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,1-Dichloroethane	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,1-Dichloroethene	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2-Dichloropropane	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,3-Dichloropropane	ND	16	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
2,2-Dichloropropane	ND	17	200		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,1-Dichloropropene	ND	13	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Hexachlorobutadiene	ND	20	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
2-Hexanone	ND	84	1000		µg/L	100	11/9/2016 5:57:27 PM	R38566
Isopropylbenzene	35	10	100	J	µg/L	100	11/9/2016 5:57:27 PM	R38566
4-Isopropyltoluene	ND	14	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
4-Methyl-2-pentanone	ND	43	1000		µg/L	100	11/9/2016 5:57:27 PM	R38566
Methylene Chloride	ND	19	300		µg/L	100	11/9/2016 5:57:27 PM	R38566
n-Butylbenzene	32	16	300	J	µg/L	100	11/9/2016 5:57:27 PM	R38566
n-Propylbenzene	110	13	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
sec-Butylbenzene	25	12	100	J	µg/L	100	11/9/2016 5:57:27 PM	R38566
Styrene	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
tert-Butylbenzene	ND	12	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,1,1,2-Tetrachloroethane	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,1,2,2-Tetrachloroethane	ND	13	200		µg/L	100	11/9/2016 5:57:27 PM	R38566
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
trans-1,2-DCE	ND	40	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
trans-1,3-Dichloropropene	ND	10	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2,3-Trichlorobenzene	ND	11	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2,4-Trichlorobenzene	ND	13	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,1,1-Trichloroethane	ND	9.1	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,1,2-Trichloroethane	ND	13	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Trichloroethene (TCE)	ND	18	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Trichlorofluoromethane	ND	20	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
1,2,3-Trichloropropane	ND	20	200		µg/L	100	11/9/2016 5:57:27 PM	R38566
Vinyl chloride	ND	20	100		µg/L	100	11/9/2016 5:57:27 PM	R38566
Xylenes, Total	9100	37	150		µg/L	100	11/9/2016 5:57:27 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP05

Project: 2016 4th QTR (MKTF)

Collection Date: 11/3/2016

Lab ID: 1611209-005

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	100	11/9/2016 5:57:27 PM	R38566
Surr: 4-Bromofluorobenzene	91.7	0	70-130		%Rec	100	11/9/2016 5:57:27 PM	R38566
Surr: Dibromofluoromethane	109	0	70-130		%Rec	100	11/9/2016 5:57:27 PM	R38566
Surr: Toluene-d8	101	0	70-130		%Rec	100	11/9/2016 5:57:27 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-11

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 2:40:00 PM

Lab ID: 1611209-006

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	1.6	0.69	1.0		mg/L	1	11/9/2016 10:37:16 AM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 10:37:16 AM	28543
Surr: DNOP	112	0	77.1-144		%Rec	1	11/9/2016 10:37:16 AM	28543
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	27	1.3	2.5		mg/L	50	11/9/2016 3:30:47 PM	G38568
Surr: BFB	92.8	0	66.4-120		%Rec	50	11/9/2016 3:30:47 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	ND	0.25	0.50		mg/L	5	11/4/2016 11:35:02 AM	R38478
Chloride	900	5.1	50		mg/L	100	11/15/2016 6:12:07 PM	R38732
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 11:35:02 AM	R38478
Bromide	0.77	0.22	0.50		mg/L	5	11/4/2016 11:35:02 AM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 11:35:02 AM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 11:35:02 AM	R38478
Sulfate	2.2	0.71	2.5	J	mg/L	5	11/4/2016 11:35:02 AM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	2.6	0.0066	0.010	*	mg/L	5	11/28/2016 2:55:03 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 2:53:14 PM	B38985
Calcium	170	2.5	5.0		mg/L	5	11/28/2016 2:55:03 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 2:53:14 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 2:53:14 PM	B38985
Iron	5.4	0.20	0.20	*	mg/L	10	11/28/2016 8:10:06 PM	B38985
Magnesium	48	0.50	1.0		mg/L	1	11/28/2016 2:53:14 PM	B38985
Manganese	3.9	0.0016	0.010	*	mg/L	5	11/28/2016 2:55:03 PM	B38985
Potassium	1.3	0.50	1.0		mg/L	1	11/28/2016 2:53:14 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 2:53:14 PM	B38985
Sodium	790	5.0	10		mg/L	10	11/28/2016 8:10:06 PM	B38985
Zinc	0.0038	0.0028	0.010	J	mg/L	1	11/28/2016 2:53:14 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	2.7	0.0079	0.020	*	mg/L	10	11/28/2016 10:16:21 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:46:45 AM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 11:46:45 AM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/21/2016 11:46:45 AM	28751
Iron	8.4	0.20	0.20	*	mg/L	10	11/28/2016 10:16:21 AM	28751
Manganese	4.0	0.0027	0.020	*	mg/L	10	11/28/2016 10:16:21 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:46:45 AM	28751
Zinc	0.011	0.0027	0.010		mg/L	1	11/28/2016 10:07:26 AM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-11

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 2:40:00 PM

Lab ID: 1611209-006

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.013	0.00014	0.0010	*	mg/L	1	11/18/2016 6:56:12 PM	A38851
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 6:56:12 PM	A38851
Selenium	0.0046	0.00021	0.0010		mg/L	1	11/18/2016 6:56:12 PM	A38851
Uranium	0.0059	0.000051	0.00050		mg/L	1	11/18/2016 6:56:12 PM	A38851
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.014	0.00021	0.0010	*	mg/L	1	11/21/2016 5:04:11 PM	28751
Lead	0.0011	0.000081	0.00050		mg/L	1	11/18/2016 3:48:02 PM	28751
Selenium	0.0050	0.0019	0.010	J	mg/L	10	11/21/2016 5:13:17 PM	28751
Uranium	0.0065	0.00017	0.00050		mg/L	1	11/18/2016 3:48:02 PM	28751
EPA METHOD 245.1: MERCURY							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 5:00:41 PM	28761
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Aniline	7.0	2.4	10	J	µg/L	1	11/9/2016 5:03:21 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Benzoic acid	ND	2.6	20		µg/L	1	11/9/2016 5:03:21 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Bis(2-ethylhexyl)phthalate	6.4	2.6	10	J	µg/L	1	11/9/2016 5:03:21 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/9/2016 5:03:21 PM	28498
Carbazole	2.4	2.3	10	J	µg/L	1	11/9/2016 5:03:21 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 5:03:21 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498

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

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-11

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 2:40:00 PM

Lab ID: 1611209-006

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	7.2	2.0	10	J	µg/L	1	11/9/2016 5:03:21 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 5:03:21 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 5:03:21 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 5:03:21 PM	28498
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 5:03:21 PM	28498
2,4-Dimethylphenol	13	3.0	10		µg/L	1	11/9/2016 5:03:21 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 5:03:21 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 5:03:21 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Fluorene	ND	2.7	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
1-Methylnaphthalene	15	2.9	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2-Methylnaphthalene	9.5	2.9	10	J	µg/L	1	11/9/2016 5:03:21 PM	28498
2-Methylphenol	96	2.5	10		µg/L	1	11/9/2016 5:03:21 PM	28498
3+4-Methylphenol	89	2.3	10		µg/L	1	11/9/2016 5:03:21 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 5:03:21 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Naphthalene	34	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 5:03:21 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 5:03:21 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 5:03:21 PM	28498
Phenanthrene	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-11

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 2:40:00 PM

Lab ID: 1611209-006

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	40	2.0	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 5:03:21 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 5:03:21 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 5:03:21 PM	28498
Surr: 2-Fluorophenol	28.4	0	15-98.1		%Rec	1	11/9/2016 5:03:21 PM	28498
Surr: Phenol-d5	25.3	0	15-80.7		%Rec	1	11/9/2016 5:03:21 PM	28498
Surr: 2,4,6-Tribromophenol	47.6	0	15-112		%Rec	1	11/9/2016 5:03:21 PM	28498
Surr: Nitrobenzene-d5	80.0	0	27.2-90.7		%Rec	1	11/9/2016 5:03:21 PM	28498
Surr: 2-Fluorobiphenyl	67.4	0	23.3-85.6		%Rec	1	11/9/2016 5:03:21 PM	28498
Surr: 4-Terphenyl-d14	53.4	0	27.6-107		%Rec	1	11/9/2016 5:03:21 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	3900	4.8	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Toluene	4500	5.9	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Ethylbenzene	520	5.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Methyl tert-butyl ether (MTBE)	71	11	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2,4-Trimethylbenzene	250	5.5	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,3,5-Trimethylbenzene	49	5.8	50	J	µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2-Dichloroethane (EDC)	ND	5.8	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2-Dibromoethane (EDB)	ND	5.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Naphthalene	48	4.6	100	J	µg/L	50	11/9/2016 6:26:17 PM	R38566
1-Methylnaphthalene	ND	10	200		µg/L	50	11/9/2016 6:26:17 PM	R38566
2-Methylnaphthalene	ND	7.9	200		µg/L	50	11/9/2016 6:26:17 PM	R38566
Acetone	ND	250	500		µg/L	50	11/9/2016 6:26:17 PM	R38566
Bromobenzene	ND	4.9	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Bromodichloromethane	ND	7.0	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Bromoform	ND	5.1	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Bromomethane	ND	39	150		µg/L	50	11/9/2016 6:26:17 PM	R38566
2-Butanone	220	37	500	J	µg/L	50	11/9/2016 6:26:17 PM	R38566
Carbon disulfide	ND	30	500		µg/L	50	11/9/2016 6:26:17 PM	R38566
Carbon Tetrachloride	ND	5.4	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Chlorobenzene	ND	5.7	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Chloroethane	ND	9.6	100		µg/L	50	11/9/2016 6:26:17 PM	R38566
Chloroform	ND	4.4	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Chloromethane	ND	11	150		µg/L	50	11/9/2016 6:26:17 PM	R38566
2-Chlorotoluene	ND	20	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
4-Chlorotoluene	ND	6.4	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
cis-1,2-DCE	ND	6.2	50		µg/L	50	11/9/2016 6:26:17 PM	R38566

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

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	R	RPD outside accepted recovery limits	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-11

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 2:40:00 PM

Lab ID: 1611209-006

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	5.3	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2-Dibromo-3-chloropropane	ND	12	100		µg/L	50	11/9/2016 6:26:17 PM	R38566
Dibromochloromethane	ND	4.3	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Dibromomethane	ND	6.0	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2-Dichlorobenzene	ND	20	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,3-Dichlorobenzene	ND	7.2	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,4-Dichlorobenzene	ND	7.1	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Dichlorodifluoromethane	ND	18	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,1-Dichloroethane	57	5.4	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,1-Dichloroethene	ND	5.4	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2-Dichloropropane	ND	5.5	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,3-Dichloropropane	ND	7.8	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
2,2-Dichloropropane	ND	8.3	100		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,1-Dichloropropene	ND	6.7	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Hexachlorobutadiene	ND	9.9	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
2-Hexanone	ND	42	500		µg/L	50	11/9/2016 6:26:17 PM	R38566
Isopropylbenzene	21	5.2	50	J	µg/L	50	11/9/2016 6:26:17 PM	R38566
4-Isopropyltoluene	ND	7.0	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
4-Methyl-2-pentanone	26	21	500	J	µg/L	50	11/9/2016 6:26:17 PM	R38566
Methylene Chloride	ND	9.4	150		µg/L	50	11/9/2016 6:26:17 PM	R38566
n-Butylbenzene	17	8.0	150	J	µg/L	50	11/9/2016 6:26:17 PM	R38566
n-Propylbenzene	56	6.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
sec-Butylbenzene	17	6.2	50	J	µg/L	50	11/9/2016 6:26:17 PM	R38566
Styrene	ND	5.5	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
tert-Butylbenzene	ND	5.8	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,1,1,2-Tetrachloroethane	ND	5.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,1,2,2-Tetrachloroethane	ND	6.4	100		µg/L	50	11/9/2016 6:26:17 PM	R38566
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
trans-1,2-DCE	ND	20	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
trans-1,3-Dichloropropene	ND	5.2	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2,3-Trichlorobenzene	ND	5.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2,4-Trichlorobenzene	ND	6.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,1,1-Trichloroethane	ND	4.6	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,1,2-Trichloroethane	ND	6.4	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Trichloroethene (TCE)	ND	8.8	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Trichlorofluoromethane	ND	10	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
1,2,3-Trichloropropane	ND	10	100		µg/L	50	11/9/2016 6:26:17 PM	R38566
Vinyl chloride	51	9.8	50		µg/L	50	11/9/2016 6:26:17 PM	R38566
Xylenes, Total	1600	18	75		µg/L	50	11/9/2016 6:26:17 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-11

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 2:40:00 PM

Lab ID: 1611209-006

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	99.4	0	70-130		%Rec	50	11/9/2016 6:26:17 PM	R38566
Surr: 4-Bromofluorobenzene	91.0	0	70-130		%Rec	50	11/9/2016 6:26:17 PM	R38566
Surr: Dibromofluoromethane	108	0	70-130		%Rec	50	11/9/2016 6:26:17 PM	R38566
Surr: Toluene-d8	98.8	0	70-130		%Rec	50	11/9/2016 6:26:17 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110216

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:00:00 PM

Lab ID: 1611209-007

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/9/2016 11:42:09 AM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 11:42:09 AM	28543
Surr: DNOP	107	0	77.1-144		%Rec	1	11/9/2016 11:42:09 AM	28543
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	11/9/2016 3:55:10 PM	G38568
Surr: BFB	87.7	0	66.4-120		%Rec	1	11/9/2016 3:55:10 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	ND	0.050	0.10		mg/L	1	11/4/2016 11:59:52 AM	R38478
Chloride	ND	0.051	0.50		mg/L	1	11/4/2016 11:59:52 AM	R38478
Nitrogen, Nitrite (As N)	ND	0.052	0.10		mg/L	1	11/4/2016 11:59:52 AM	R38478
Bromide	ND	0.044	0.10		mg/L	1	11/4/2016 11:59:52 AM	R38478
Nitrogen, Nitrate (As N)	ND	0.041	0.10		mg/L	1	11/4/2016 11:59:52 AM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50		mg/L	1	11/4/2016 11:59:52 AM	R38478
Sulfate	ND	0.14	0.50		mg/L	1	11/4/2016 11:59:52 AM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	ND	0.0013	0.0020		mg/L	1	11/28/2016 2:56:42 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 2:56:42 PM	B38985
Calcium	ND	0.50	1.0		mg/L	1	11/28/2016 2:56:42 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 2:56:42 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 2:56:42 PM	B38985
Iron	ND	0.020	0.020		mg/L	1	11/28/2016 2:56:42 PM	B38985
Magnesium	ND	0.50	1.0		mg/L	1	11/28/2016 2:56:42 PM	B38985
Manganese	ND	0.00032	0.0020		mg/L	1	11/28/2016 2:56:42 PM	B38985
Potassium	ND	0.50	1.0		mg/L	1	11/28/2016 2:56:42 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 2:56:42 PM	B38985
Sodium	ND	0.50	1.0		mg/L	1	11/28/2016 2:56:42 PM	B38985
Zinc	ND	0.0028	0.010		mg/L	1	11/28/2016 2:56:42 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	ND	0.00079	0.0020		mg/L	1	11/21/2016 11:48:26 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:48:26 AM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 11:48:26 AM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/21/2016 11:48:26 AM	28751
Iron	ND	0.020	0.020		mg/L	1	11/21/2016 11:48:26 AM	28751
Manganese	ND	0.00027	0.0020		mg/L	1	11/21/2016 11:48:26 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:48:26 AM	28751
Zinc	ND	0.0027	0.010		mg/L	1	11/21/2016 11:48:26 AM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110216

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:00:00 PM

Lab ID: 1611209-007

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/18/2016 6:59:15 PM	A38851
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 6:59:15 PM	A38851
Selenium	ND	0.00021	0.0010		mg/L	1	11/18/2016 6:59:15 PM	A38851
Uranium	ND	0.000051	0.00050		mg/L	1	11/18/2016 6:59:15 PM	A38851
200.8 ICPMS METALS:TOTAL								Analyst: JLF
Arsenic	ND	0.00021	0.0010		mg/L	1	11/21/2016 5:16:17 PM	28751
Lead	ND	0.000081	0.00050		mg/L	1	11/18/2016 3:51:02 PM	28751
Selenium	ND	0.00019	0.0010		mg/L	1	11/21/2016 5:16:17 PM	28751
Uranium	ND	0.00017	0.00050		mg/L	1	11/18/2016 3:51:02 PM	28751
EPA METHOD 245.1: MERCURY								Analyst: JLF
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 5:02:33 PM	28761
EPA METHOD 8270C: SEMIVOLATILES								Analyst: DAM
Acenaphthene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Aniline	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Benzoic acid	7.9	2.6	20	J	µg/L	1	11/9/2016 5:31:00 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Bis(2-ethylhexyl)phthalate	6.7	2.6	10	J	µg/L	1	11/9/2016 5:31:00 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/9/2016 5:31:00 PM	28498
Carbazole	ND	2.3	10		µg/L	1	11/9/2016 5:31:00 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 5:31:00 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110216

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:00:00 PM

Lab ID: 1611209-007

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

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	11/9/2016 5:31:00 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 5:31:00 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 5:31:00 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 5:31:00 PM	28498
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 5:31:00 PM	28498
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/9/2016 5:31:00 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 5:31:00 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 5:31:00 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Fluorene	ND	2.7	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
1-Methylnaphthalene	ND	2.9	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2-Methylphenol	ND	2.5	10		µg/L	1	11/9/2016 5:31:00 PM	28498
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/9/2016 5:31:00 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 5:31:00 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Naphthalene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 5:31:00 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 5:31:00 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 5:31:00 PM	28498
Phenanthrene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498

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	R	RPD outside accepted recovery limits	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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110216

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:00:00 PM

Lab ID: 1611209-007

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/9/2016 5:31:00 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 5:31:00 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 5:31:00 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 5:31:00 PM	28498
Surr: 2-Fluorophenol	30.2	0	15-98.1		%Rec	1	11/9/2016 5:31:00 PM	28498
Surr: Phenol-d5	27.8	0	15-80.7		%Rec	1	11/9/2016 5:31:00 PM	28498
Surr: 2,4,6-Tribromophenol	40.8	0	15-112		%Rec	1	11/9/2016 5:31:00 PM	28498
Surr: Nitrobenzene-d5	83.4	0	27.2-90.7		%Rec	1	11/9/2016 5:31:00 PM	28498
Surr: 2-Fluorobiphenyl	74.8	0	23.3-85.6		%Rec	1	11/9/2016 5:31:00 PM	28498
Surr: 4-Terphenyl-d14	72.0	0	27.6-107		%Rec	1	11/9/2016 5:31:00 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	ND	0.096	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Toluene	ND	0.12	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Naphthalene	ND	0.093	2.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Acetone	ND	4.9	10		µg/L	1	11/9/2016 2:07:21 PM	R38566
Bromobenzene	ND	0.098	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Bromoform	ND	0.10	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Bromomethane	ND	0.78	3.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
2-Butanone	ND	0.74	10		µg/L	1	11/9/2016 2:07:21 PM	R38566
Carbon disulfide	ND	0.60	10		µg/L	1	11/9/2016 2:07:21 PM	R38566
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Chloroethane	ND	0.19	2.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Chloroform	ND	0.089	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Chloromethane	ND	0.21	3.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110216

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:00:00 PM

Lab ID: 1611209-007

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	11/9/2016 2:07:21 PM	R38566
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Dibromomethane	ND	0.12	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
2-Hexanone	ND	0.84	10		µg/L	1	11/9/2016 2:07:21 PM	R38566
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
4-Methyl-2-pentanone	0.43	0.43	10	J	µg/L	1	11/9/2016 2:07:21 PM	R38566
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Styrene	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/9/2016 2:07:21 PM	R38566
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/9/2016 2:07:21 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB110216

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:00:00 PM

Lab ID: 1611209-007

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	11/9/2016 2:07:21 PM	R38566
Surr: 4-Bromofluorobenzene	93.6	0	70-130		%Rec	1	11/9/2016 2:07:21 PM	R38566
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	11/9/2016 2:07:21 PM	R38566
Surr: Toluene-d8	102	0	70-130		%Rec	1	11/9/2016 2:07:21 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:35:00 PM

Lab ID: 1611209-008

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	4.1	0.69	1.0		mg/L	1	11/9/2016 12:03:33 PM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 12:03:33 PM	28543
Surr: DNOP	102	0	77.1-144		%Rec	1	11/9/2016 12:03:33 PM	28543
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	9.8	0.51	1.0		mg/L	20	11/10/2016 12:16:54 PM	G38599
Surr: BFB	94.2	0	66.4-120		%Rec	20	11/10/2016 12:16:54 PM	G38599
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	1.0	0.25	0.50		mg/L	5	11/4/2016 12:49:30 PM	R38478
Chloride	180	1.0	10		mg/L	20	11/4/2016 1:01:55 PM	R38478
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 12:49:30 PM	R38478
Bromide	2.1	0.22	0.50		mg/L	5	11/4/2016 12:49:30 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 12:49:30 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 12:49:30 PM	R38478
Sulfate	6.1	0.71	2.5		mg/L	5	11/4/2016 12:49:30 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	2.7	0.0066	0.010	*	mg/L	5	11/28/2016 3:09:51 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 3:00:35 PM	B38985
Calcium	110	2.5	5.0		mg/L	5	11/28/2016 3:09:51 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 3:00:35 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 3:00:35 PM	B38985
Iron	1.7	0.10	0.10	*	mg/L	5	11/28/2016 3:09:51 PM	B38985
Magnesium	28	0.50	1.0		mg/L	1	11/28/2016 3:00:35 PM	B38985
Manganese	1.4	0.0016	0.010	*	mg/L	5	11/28/2016 3:09:51 PM	B38985
Potassium	0.69	0.50	1.0	J	mg/L	1	11/28/2016 3:00:35 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 3:00:35 PM	B38985
Sodium	340	2.5	5.0		mg/L	5	11/28/2016 3:09:51 PM	B38985
Zinc	0.0057	0.0028	0.010	J	mg/L	1	11/28/2016 3:00:35 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	2.8	0.0079	0.020	*	mg/L	10	11/28/2016 10:20:13 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:50:15 AM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 11:50:15 AM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/21/2016 11:50:15 AM	28751
Iron	4.6	0.20	0.20	*	mg/L	10	11/28/2016 10:20:13 AM	28751
Manganese	1.5	0.0027	0.020	*	mg/L	10	11/28/2016 10:20:13 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:50:15 AM	28751
Zinc	0.0060	0.0027	0.010	J	mg/L	1	11/28/2016 10:18:20 AM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:35:00 PM

Lab ID: 1611209-008

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.010	0.00069	0.0050	*	mg/L	5	11/22/2016 2:55:36 PM	C38934
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 7:17:38 PM	B38851
Selenium	0.011	0.0042	0.020	J	mg/L	20	11/22/2016 2:58:39 PM	C38934
Uranium	0.0031	0.000051	0.00050		mg/L	1	11/18/2016 7:17:38 PM	B38851
200.8 ICPMS METALS:TOTAL								
							Analyst: JLF	
Arsenic	0.010	0.0011	0.0050	*	mg/L	5	11/21/2016 5:19:18 PM	28751
Lead	0.00063	0.000081	0.00050		mg/L	1	11/18/2016 3:54:02 PM	28751
Selenium	0.010	0.0037	0.020	J	mg/L	20	11/21/2016 5:22:18 PM	28751
Uranium	0.0041	0.00017	0.00050		mg/L	1	11/18/2016 3:54:02 PM	28751
EPA METHOD 245.1: MERCURY								
							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 5:04:17 PM	28761
EPA METHOD 8270C: SEMIVOLATILES								
							Analyst: DAM	
Acenaphthene	5.5	2.6	10	J	µg/L	1	11/9/2016 5:58:39 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Aniline	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Benzoic acid	ND	2.6	20		µg/L	1	11/9/2016 5:58:39 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Bis(2-ethylhexyl)phthalate	6.8	2.6	10	J	µg/L	1	11/9/2016 5:58:39 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Carbazole	20	2.3	10		µg/L	1	11/9/2016 5:58:39 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 5:58:39 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:35:00 PM

Lab ID: 1611209-008

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	7.3	2.0	10	J	µg/L	1	11/9/2016 5:58:39 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 5:58:39 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 5:58:39 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 5:58:39 PM	28498
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 5:58:39 PM	28498
2,4-Dimethylphenol	4.3	3.0	10	J	µg/L	1	11/9/2016 5:58:39 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 5:58:39 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 5:58:39 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Fluorene	8.2	2.7	10	J	µg/L	1	11/9/2016 5:58:39 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
1-Methylnaphthalene	150	2.9	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2-Methylnaphthalene	170	2.9	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2-Methylphenol	ND	2.5	10		µg/L	1	11/9/2016 5:58:39 PM	28498
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/9/2016 5:58:39 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 5:58:39 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Naphthalene	250	5.2	20		µg/L	2	11/16/2016 4:13:45 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 5:58:39 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 5:58:39 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 5:58:39 PM	28498
Phenanthrene	8.0	2.6	10	J	µg/L	1	11/9/2016 5:58:39 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:35:00 PM

Lab ID: 1611209-008

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	2.6	2.0	10	J	µg/L	1	11/9/2016 5:58:39 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 5:58:39 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 5:58:39 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 5:58:39 PM	28498
Surr: 2-Fluorophenol	27.5	0	15-98.1		%Rec	1	11/9/2016 5:58:39 PM	28498
Surr: Phenol-d5	25.8	0	15-80.7		%Rec	1	11/9/2016 5:58:39 PM	28498
Surr: 2,4,6-Tribromophenol	56.4	0	15-112		%Rec	1	11/9/2016 5:58:39 PM	28498
Surr: Nitrobenzene-d5	78.2	0	27.2-90.7		%Rec	1	11/9/2016 5:58:39 PM	28498
Surr: 2-Fluorobiphenyl	68.7	0	23.3-85.6		%Rec	1	11/9/2016 5:58:39 PM	28498
Surr: 4-Terphenyl-d14	50.5	0	27.6-107		%Rec	1	11/9/2016 5:58:39 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	880	4.8	50		µg/L	50	11/9/2016 6:55:07 PM	R38566
Toluene	18	0.59	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Ethylbenzene	640	5.6	50		µg/L	50	11/9/2016 6:55:07 PM	R38566
Methyl tert-butyl ether (MTBE)	2100	11	50		µg/L	50	11/9/2016 6:55:07 PM	R38566
1,2,4-Trimethylbenzene	370	0.55	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,3,5-Trimethylbenzene	63	0.58	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2-Dichloroethane (EDC)	2.3	0.58	5.0	J	µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2-Dibromoethane (EDB)	ND	0.56	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Naphthalene	300	0.46	10		µg/L	5	11/9/2016 7:23:54 PM	R38566
1-Methylnaphthalene	190	1.0	20		µg/L	5	11/9/2016 7:23:54 PM	R38566
2-Methylnaphthalene	160	0.79	20		µg/L	5	11/9/2016 7:23:54 PM	R38566
Acetone	ND	25	50		µg/L	5	11/9/2016 7:23:54 PM	R38566
Bromobenzene	ND	0.49	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Bromodichloromethane	ND	0.70	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Bromoform	ND	0.51	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Bromomethane	ND	3.9	15		µg/L	5	11/9/2016 7:23:54 PM	R38566
2-Butanone	ND	3.7	50		µg/L	5	11/9/2016 7:23:54 PM	R38566
Carbon disulfide	ND	3.0	50		µg/L	5	11/9/2016 7:23:54 PM	R38566
Carbon Tetrachloride	ND	0.54	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Chlorobenzene	ND	0.57	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Chloroethane	ND	0.96	10		µg/L	5	11/9/2016 7:23:54 PM	R38566
Chloroform	ND	0.44	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Chloromethane	ND	1.1	15		µg/L	5	11/9/2016 7:23:54 PM	R38566
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
4-Chlorotoluene	ND	0.64	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
cis-1,2-DCE	5.5	0.62	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566

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-04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:35:00 PM

Lab ID: 1611209-008

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	0.53	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2-Dibromo-3-chloropropane	ND	1.2	10		µg/L	5	11/9/2016 7:23:54 PM	R38566
Dibromochloromethane	ND	0.43	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Dibromomethane	ND	0.60	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2-Dichlorobenzene	ND	2.0	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,3-Dichlorobenzene	ND	0.72	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,4-Dichlorobenzene	ND	0.71	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Dichlorodifluoromethane	ND	1.8	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,1-Dichloroethane	10	0.54	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,1-Dichloroethene	14	0.54	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2-Dichloropropane	ND	0.55	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,3-Dichloropropane	ND	0.78	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
2,2-Dichloropropane	ND	0.83	10		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,1-Dichloropropene	ND	0.67	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Hexachlorobutadiene	ND	0.99	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
2-Hexanone	ND	4.2	50		µg/L	5	11/9/2016 7:23:54 PM	R38566
Isopropylbenzene	24	0.52	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
4-Isopropyltoluene	3.7	0.70	5.0	J	µg/L	5	11/9/2016 7:23:54 PM	R38566
4-Methyl-2-pentanone	ND	2.1	50		µg/L	5	11/9/2016 7:23:54 PM	R38566
Methylene Chloride	ND	0.94	15		µg/L	5	11/9/2016 7:23:54 PM	R38566
n-Butylbenzene	6.1	0.80	15	J	µg/L	5	11/9/2016 7:23:54 PM	R38566
n-Propylbenzene	43	0.66	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
sec-Butylbenzene	4.5	0.62	5.0	J	µg/L	5	11/9/2016 7:23:54 PM	R38566
Styrene	1.5	0.55	5.0	J	µg/L	5	11/9/2016 7:23:54 PM	R38566
tert-Butylbenzene	ND	0.58	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,1,1,2-Tetrachloroethane	ND	0.56	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,1,2,2-Tetrachloroethane	ND	0.64	10		µg/L	5	11/9/2016 7:23:54 PM	R38566
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
trans-1,2-DCE	ND	2.0	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
trans-1,3-Dichloropropene	ND	0.52	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2,3-Trichlorobenzene	ND	0.56	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2,4-Trichlorobenzene	ND	0.66	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,1,1-Trichloroethane	ND	0.46	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,1,2-Trichloroethane	ND	0.64	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Trichloroethene (TCE)	ND	0.88	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Trichlorofluoromethane	ND	1.0	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
1,2,3-Trichloropropane	ND	1.0	10		µg/L	5	11/9/2016 7:23:54 PM	R38566
Vinyl chloride	ND	0.98	5.0		µg/L	5	11/9/2016 7:23:54 PM	R38566
Xylenes, Total	850	1.8	7.5		µg/L	5	11/9/2016 7:23:54 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 3:35:00 PM

Lab ID: 1611209-008

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	93.6	0	70-130		%Rec	5	11/9/2016 7:23:54 PM	R38566
Surr: 4-Bromofluorobenzene	78.3	0	70-130		%Rec	5	11/9/2016 7:23:54 PM	R38566
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	5	11/9/2016 7:23:54 PM	R38566
Surr: Toluene-d8	103	0	70-130		%Rec	5	11/9/2016 7:23:54 PM	R38566

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-10

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:20:00 PM

Lab ID: 1611209-009

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	3.8	0.69	1.0		mg/L	1	11/9/2016 12:25:03 PM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 12:25:03 PM	28543
Surr: DNOP	106	0	77.1-144		%Rec	1	11/9/2016 12:25:03 PM	28543
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	100	5.1	10		mg/L	200	11/9/2016 4:44:03 PM	G38568
Surr: BFB	87.6	0	66.4-120		%Rec	200	11/9/2016 4:44:03 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	ND	0.25	0.50		mg/L	5	11/4/2016 1:14:19 PM	R38478
Chloride	230	1.0	10		mg/L	20	11/4/2016 1:26:44 PM	R38478
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 1:14:19 PM	R38478
Bromide	0.92	0.22	0.50		mg/L	5	11/4/2016 1:14:19 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 1:14:19 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 1:14:19 PM	R38478
Sulfate	ND	0.71	2.5		mg/L	5	11/4/2016 1:14:19 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	5.8	0.013	0.020	*	mg/L	10	11/28/2016 8:12:08 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 3:11:55 PM	B38985
Calcium	220	2.5	5.0		mg/L	5	11/28/2016 3:13:33 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 3:11:55 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 3:11:55 PM	B38985
Iron	9.4	0.20	0.20	*	mg/L	10	11/28/2016 8:12:08 PM	B38985
Magnesium	53	0.50	1.0		mg/L	1	11/28/2016 3:11:55 PM	B38985
Manganese	5.2	0.0032	0.020	*	mg/L	10	11/28/2016 8:12:08 PM	B38985
Potassium	0.66	0.50	1.0	J	mg/L	1	11/28/2016 3:11:55 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 3:11:55 PM	B38985
Sodium	270	2.5	5.0		mg/L	5	11/28/2016 3:13:33 PM	B38985
Zinc	ND	0.0028	0.010		mg/L	1	11/28/2016 3:11:55 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	6.0	0.0079	0.020	*	mg/L	10	11/28/2016 10:24:01 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:51:52 AM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 11:51:52 AM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/21/2016 11:51:52 AM	28751
Iron	10	1.0	1.0	*	mg/L	50	11/28/2016 10:25:49 AM	28751
Manganese	5.2	0.0027	0.020	*	mg/L	10	11/28/2016 10:24:01 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:51:52 AM	28751
Zinc	0.0044	0.0027	0.010	J	mg/L	1	11/28/2016 10:22:11 AM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-10

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:20:00 PM

Lab ID: 1611209-009

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS								Analyst: JLF
Arsenic	0.0080	0.00014	0.0010		mg/L	1	11/18/2016 7:20:41 PM	B38851
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 7:20:41 PM	B38851
Selenium	0.0046	0.00021	0.0010		mg/L	1	11/18/2016 7:20:41 PM	B38851
Uranium	0.00065	0.000051	0.00050		mg/L	1	11/18/2016 7:20:41 PM	B38851
200.8 ICPMS METALS:TOTAL								Analyst: JLF
Arsenic	0.0096	0.0011	0.0050		mg/L	5	11/21/2016 5:25:19 PM	28751
Lead	0.0011	0.000081	0.00050		mg/L	1	11/18/2016 3:57:03 PM	28751
Selenium	0.0049	0.00094	0.0050	J	mg/L	5	11/21/2016 5:25:19 PM	28751
Uranium	0.00086	0.00017	0.00050		mg/L	1	11/18/2016 3:57:03 PM	28751
EPA METHOD 245.1: MERCURY								Analyst: JLF
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 5:06:01 PM	28761
EPA METHOD 8270C: SEMIVOLATILES								Analyst: DAM
Acenaphthene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Acenaphthylene	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Aniline	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Anthracene	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Azobenzene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Benz(a)anthracene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Benzo(a)pyrene	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Benzo(b)fluoranthene	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Benzo(g,h,i)perylene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Benzo(k)fluoranthene	ND	15	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Benzoic acid	56	13	100	J	µg/L	1	11/9/2016 6:26:19 PM	28498
Benzyl alcohol	ND	15	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Bis(2-chloroethoxy)methane	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Bis(2-chloroethyl)ether	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Bis(2-chloroisopropyl)ether	ND	9.5	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Bis(2-ethylhexyl)phthalate	34	13	50	J	µg/L	1	11/9/2016 6:26:19 PM	28498
4-Bromophenyl phenyl ether	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Butyl benzyl phthalate	14	12	50	J	µg/L	1	11/9/2016 6:26:19 PM	28498
Carbazole	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
4-Chloro-3-methylphenol	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
4-Chloroaniline	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2-Chloronaphthalene	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2-Chlorophenol	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
4-Chlorophenyl phenyl ether	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Chrysene	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Di-n-butyl phthalate	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-10

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:20:00 PM

Lab ID: 1611209-009

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	37	9.9	50	J	µg/L	1	11/9/2016 6:26:19 PM	28498
Dibenz(a,h)anthracene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Dibenzofuran	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
1,2-Dichlorobenzene	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
1,3-Dichlorobenzene	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
1,4-Dichlorobenzene	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
3,3'-Dichlorobenzidine	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Diethyl phthalate	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Dimethyl phthalate	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2,4-Dichlorophenol	ND	12	100		µg/L	1	11/9/2016 6:26:19 PM	28498
2,4-Dimethylphenol	39	15	50	J	µg/L	1	11/9/2016 6:26:19 PM	28498
4,6-Dinitro-2-methylphenol	ND	9.0	100		µg/L	1	11/9/2016 6:26:19 PM	28498
2,4-Dinitrophenol	ND	14	100		µg/L	1	11/9/2016 6:26:19 PM	28498
2,4-Dinitrotoluene	ND	16	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2,6-Dinitrotoluene	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Fluoranthene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Fluorene	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Hexachlorobenzene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Hexachlorobutadiene	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Hexachlorocyclopentadiene	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Hexachloroethane	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Indeno(1,2,3-cd)pyrene	ND	15	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Isophorone	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
1-Methylnaphthalene	47	15	50	J	µg/L	1	11/9/2016 6:26:19 PM	28498
2-Methylnaphthalene	70	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2-Methylphenol	130	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
3+4-Methylphenol	180	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
N-Nitrosodi-n-propylamine	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
N-Nitrosodimethylamine	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Naphthalene	150	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2-Nitroaniline	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
3-Nitroaniline	ND	15	50		µg/L	1	11/9/2016 6:26:19 PM	28498
4-Nitroaniline	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Nitrobenzene	ND	14	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2-Nitrophenol	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
4-Nitrophenol	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Pentachlorophenol	ND	12	100		µg/L	1	11/9/2016 6:26:19 PM	28498
Phenanthrene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-10

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:20:00 PM

Lab ID: 1611209-009

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	79	9.9	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Pyrene	ND	15	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Pyridine	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
1,2,4-Trichlorobenzene	ND	13	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2,4,5-Trichlorophenol	ND	11	50		µg/L	1	11/9/2016 6:26:19 PM	28498
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	11/9/2016 6:26:19 PM	28498
Surr: 2-Fluorophenol	21.5	0	15-98.1		%Rec	1	11/9/2016 6:26:19 PM	28498
Surr: Phenol-d5	17.6	0	15-80.7		%Rec	1	11/9/2016 6:26:19 PM	28498
Surr: 2,4,6-Tribromophenol	46.8	0	15-112		%Rec	1	11/9/2016 6:26:19 PM	28498
Surr: Nitrobenzene-d5	73.4	0	27.2-90.7		%Rec	1	11/9/2016 6:26:19 PM	28498
Surr: 2-Fluorobiphenyl	66.3	0	23.3-85.6		%Rec	1	11/9/2016 6:26:19 PM	28498
Surr: 4-Terphenyl-d14	61.4	0	27.6-107		%Rec	1	11/9/2016 6:26:19 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	17000	96	1000		µg/L	1000	11/9/2016 7:52:42 PM	R38566
Toluene	22000	120	1000		µg/L	1000	11/9/2016 7:52:42 PM	R38566
Ethylbenzene	1700	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Methyl tert-butyl ether (MTBE)	ND	21	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2,4-Trimethylbenzene	850	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,3,5-Trimethylbenzene	200	12	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2-Dichloroethane (EDC)	ND	12	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2-Dibromoethane (EDB)	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Naphthalene	240	9.3	200		µg/L	100	11/9/2016 8:21:33 PM	R38566
1-Methylnaphthalene	100	20	400	J	µg/L	100	11/9/2016 8:21:33 PM	R38566
2-Methylnaphthalene	100	16	400	J	µg/L	100	11/9/2016 8:21:33 PM	R38566
Acetone	ND	490	1000		µg/L	100	11/9/2016 8:21:33 PM	R38566
Bromobenzene	ND	9.8	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Bromodichloromethane	ND	14	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Bromoform	ND	10	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Bromomethane	ND	78	300		µg/L	100	11/9/2016 8:21:33 PM	R38566
2-Butanone	690	74	1000	J	µg/L	100	11/9/2016 8:21:33 PM	R38566
Carbon disulfide	ND	60	1000		µg/L	100	11/9/2016 8:21:33 PM	R38566
Carbon Tetrachloride	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Chlorobenzene	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Chloroethane	ND	19	200		µg/L	100	11/9/2016 8:21:33 PM	R38566
Chloroform	ND	8.9	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Chloromethane	ND	21	300		µg/L	100	11/9/2016 8:21:33 PM	R38566
2-Chlorotoluene	ND	40	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
4-Chlorotoluene	ND	13	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
cis-1,2-DCE	26	12	100	J	µg/L	100	11/9/2016 8:21:33 PM	R38566

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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-10

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:20:00 PM

Lab ID: 1611209-009

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2-Dibromo-3-chloropropane	ND	23	200		µg/L	100	11/9/2016 8:21:33 PM	R38566
Dibromochloromethane	ND	8.7	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Dibromomethane	ND	12	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2-Dichlorobenzene	ND	40	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,3-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,4-Dichlorobenzene	ND	14	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Dichlorodifluoromethane	ND	36	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,1-Dichloroethane	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,1-Dichloroethene	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2-Dichloropropane	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,3-Dichloropropane	ND	16	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
2,2-Dichloropropane	ND	17	200		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,1-Dichloropropene	ND	13	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Hexachlorobutadiene	ND	20	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
2-Hexanone	ND	84	1000		µg/L	100	11/9/2016 8:21:33 PM	R38566
Isopropylbenzene	49	10	100	J	µg/L	100	11/9/2016 8:21:33 PM	R38566
4-Isopropyltoluene	ND	14	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
4-Methyl-2-pentanone	62	43	1000	J	µg/L	100	11/9/2016 8:21:33 PM	R38566
Methylene Chloride	ND	19	300		µg/L	100	11/9/2016 8:21:33 PM	R38566
n-Butylbenzene	32	16	300	J	µg/L	100	11/9/2016 8:21:33 PM	R38566
n-Propylbenzene	130	13	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
sec-Butylbenzene	ND	12	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Styrene	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
tert-Butylbenzene	ND	12	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,1,1,2-Tetrachloroethane	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,1,2,2-Tetrachloroethane	ND	13	200		µg/L	100	11/9/2016 8:21:33 PM	R38566
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
trans-1,2-DCE	ND	40	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
trans-1,3-Dichloropropene	ND	10	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2,3-Trichlorobenzene	ND	11	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2,4-Trichlorobenzene	ND	13	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,1,1-Trichloroethane	ND	9.1	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,1,2-Trichloroethane	ND	13	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Trichloroethene (TCE)	ND	18	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Trichlorofluoromethane	ND	20	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
1,2,3-Trichloropropane	ND	20	200		µg/L	100	11/9/2016 8:21:33 PM	R38566
Vinyl chloride	ND	20	100		µg/L	100	11/9/2016 8:21:33 PM	R38566
Xylenes, Total	8000	37	150		µg/L	100	11/9/2016 8:21:33 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-10

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:20:00 PM

Lab ID: 1611209-009

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 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	100	11/9/2016 8:21:33 PM	R38566
Surr: 4-Bromofluorobenzene	93.2	0	70-130		%Rec	100	11/9/2016 8:21:33 PM	R38566
Surr: Dibromofluoromethane	108	0	70-130		%Rec	100	11/9/2016 8:21:33 PM	R38566
Surr: Toluene-d8	103	0	70-130		%Rec	100	11/9/2016 8:21:33 PM	R38566

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-09

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:55:00 PM

Lab ID: 1611209-010

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	1.6	0.69	1.0		mg/L	1	11/9/2016 12:46:30 PM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 12:46:30 PM	28543
Surr: DNOP	103	0	77.1-144		%Rec	1	11/9/2016 12:46:30 PM	28543
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	7.8	0.51	1.0		mg/L	20	11/9/2016 5:08:36 PM	G38568
Surr: BFB	88.9	0	66.4-120		%Rec	20	11/9/2016 5:08:36 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	0.46	0.25	0.50	J	mg/L	5	11/4/2016 1:39:09 PM	R38478
Chloride	150	1.0	10		mg/L	20	11/4/2016 1:51:33 PM	R38478
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 1:39:09 PM	R38478
Bromide	1.1	0.22	0.50		mg/L	5	11/4/2016 1:39:09 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 1:39:09 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 1:39:09 PM	R38478
Sulfate	71	0.71	2.5		mg/L	5	11/4/2016 1:39:09 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	0.40	0.0013	0.0020		mg/L	1	11/28/2016 3:15:13 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 3:15:13 PM	B38985
Calcium	140	2.5	5.0		mg/L	5	11/28/2016 3:16:55 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 3:15:13 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 3:15:13 PM	B38985
Iron	0.92	0.020	0.020	*	mg/L	1	11/28/2016 3:15:13 PM	B38985
Magnesium	28	0.50	1.0		mg/L	1	11/28/2016 3:15:13 PM	B38985
Manganese	3.2	0.0016	0.010	*	mg/L	5	11/28/2016 3:16:55 PM	B38985
Potassium	0.56	0.50	1.0	J	mg/L	1	11/28/2016 3:15:13 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 3:15:13 PM	B38985
Sodium	240	2.5	5.0		mg/L	5	11/28/2016 3:16:55 PM	B38985
Zinc	0.27	0.0028	0.010		mg/L	1	11/28/2016 3:15:13 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	0.47	0.00079	0.0020		mg/L	1	11/21/2016 11:53:32 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:53:32 AM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 11:53:32 AM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/21/2016 11:53:32 AM	28751
Iron	1.7	0.10	0.10	*	mg/L	5	11/28/2016 10:29:24 AM	28751
Manganese	3.6	0.0014	0.010	*	mg/L	5	11/28/2016 10:29:24 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:53:32 AM	28751
Zinc	0.0030	0.0027	0.010	J	mg/L	1	11/28/2016 10:27:43 AM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-09

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:55:00 PM

Lab ID: 1611209-010

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.0028	0.00014	0.0010		mg/L	1	11/18/2016 7:23:44 PM	B38851
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 7:23:44 PM	B38851
Selenium	0.0055	0.00021	0.0010		mg/L	1	11/18/2016 7:23:44 PM	B38851
Uranium	0.0065	0.000051	0.00050		mg/L	1	11/18/2016 7:23:44 PM	B38851
200.8 ICPMS METALS:TOTAL								
							Analyst: JLF	
Arsenic	0.0028	0.0011	0.0050	J	mg/L	5	11/21/2016 5:31:19 PM	28751
Lead	0.0016	0.000081	0.00050		mg/L	1	11/18/2016 4:00:03 PM	28751
Selenium	0.0058	0.0037	0.020	J	mg/L	20	11/21/2016 5:34:20 PM	28751
Uranium	0.0066	0.00017	0.00050		mg/L	1	11/18/2016 4:00:03 PM	28751
EPA METHOD 245.1: MERCURY								
							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 5:11:28 PM	28761
EPA METHOD 8270C: SEMIVOLATILES								
							Analyst: DAM	
Acenaphthene	3.8	2.6	10	J	µg/L	1	11/9/2016 6:53:58 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Aniline	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Benzoic acid	ND	2.6	20		µg/L	1	11/9/2016 6:53:58 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Bis(2-ethylhexyl)phthalate	6.6	2.6	10	J	µg/L	1	11/9/2016 6:53:58 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Carbazole	10	2.3	10		µg/L	1	11/9/2016 6:53:58 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 6:53:58 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498

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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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-09

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:55:00 PM

Lab ID: 1611209-010

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	7.0	2.0	10	J	µg/L	1	11/9/2016 6:53:58 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 6:53:58 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 6:53:58 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 6:53:58 PM	28498
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 6:53:58 PM	28498
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/9/2016 6:53:58 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 6:53:58 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 6:53:58 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Fluorene	6.1	2.7	10	J	µg/L	1	11/9/2016 6:53:58 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
1-Methylnaphthalene	48	2.9	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2-Methylphenol	ND	2.5	10		µg/L	1	11/9/2016 6:53:58 PM	28498
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/9/2016 6:53:58 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 6:53:58 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Naphthalene	23	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 6:53:58 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 6:53:58 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 6:53:58 PM	28498
Phenanthrene	6.6	2.6	10	J	µg/L	1	11/9/2016 6:53:58 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-09

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:55:00 PM

Lab ID: 1611209-010

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	2.5	2.0	10	J	µg/L	1	11/9/2016 6:53:58 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 6:53:58 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 6:53:58 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 6:53:58 PM	28498
Surr: 2-Fluorophenol	23.1	0	15-98.1		%Rec	1	11/9/2016 6:53:58 PM	28498
Surr: Phenol-d5	19.6	0	15-80.7		%Rec	1	11/9/2016 6:53:58 PM	28498
Surr: 2,4,6-Tribromophenol	38.0	0	15-112		%Rec	1	11/9/2016 6:53:58 PM	28498
Surr: Nitrobenzene-d5	66.1	0	27.2-90.7		%Rec	1	11/9/2016 6:53:58 PM	28498
Surr: 2-Fluorobiphenyl	62.0	0	23.3-85.6		%Rec	1	11/9/2016 6:53:58 PM	28498
Surr: 4-Terphenyl-d14	50.3	0	27.6-107		%Rec	1	11/9/2016 6:53:58 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	1600	9.6	100		µg/L	100	11/9/2016 8:50:22 PM	R38566
Toluene	26	1.2	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Ethylbenzene	210	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Methyl tert-butyl ether (MTBE)	500	2.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2,4-Trimethylbenzene	43	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,3,5-Trimethylbenzene	ND	1.2	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2-Dichloroethane (EDC)	ND	1.2	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2-Dibromoethane (EDB)	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Naphthalene	29	0.93	20		µg/L	10	11/9/2016 9:19:06 PM	R38566
1-Methylnaphthalene	64	2.0	40		µg/L	10	11/9/2016 9:19:06 PM	R38566
2-Methylnaphthalene	5.6	1.6	40	J	µg/L	10	11/9/2016 9:19:06 PM	R38566
Acetone	ND	49	100		µg/L	10	11/9/2016 9:19:06 PM	R38566
Bromobenzene	ND	0.98	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Bromodichloromethane	ND	1.4	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Bromoform	ND	1.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Bromomethane	ND	7.8	30		µg/L	10	11/9/2016 9:19:06 PM	R38566
2-Butanone	ND	7.4	100		µg/L	10	11/9/2016 9:19:06 PM	R38566
Carbon disulfide	ND	6.0	100		µg/L	10	11/9/2016 9:19:06 PM	R38566
Carbon Tetrachloride	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Chlorobenzene	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Chloroethane	ND	1.9	20		µg/L	10	11/9/2016 9:19:06 PM	R38566
Chloroform	ND	0.89	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Chloromethane	ND	2.1	30		µg/L	10	11/9/2016 9:19:06 PM	R38566
2-Chlorotoluene	ND	4.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
4-Chlorotoluene	ND	1.3	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
cis-1,2-DCE	27	1.2	10		µg/L	10	11/9/2016 9:19:06 PM	R38566

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-09

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:55:00 PM

Lab ID: 1611209-010

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2-Dibromo-3-chloropropane	ND	2.3	20		µg/L	10	11/9/2016 9:19:06 PM	R38566
Dibromochloromethane	ND	0.87	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Dibromomethane	ND	1.2	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2-Dichlorobenzene	ND	4.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,3-Dichlorobenzene	ND	1.4	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,4-Dichlorobenzene	ND	1.4	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Dichlorodifluoromethane	ND	3.6	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,1-Dichloroethane	28	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,1-Dichloroethene	25	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2-Dichloropropane	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,3-Dichloropropane	ND	1.6	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
2,2-Dichloropropane	ND	1.7	20		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,1-Dichloropropene	ND	1.3	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Hexachlorobutadiene	ND	2.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
2-Hexanone	ND	8.4	100		µg/L	10	11/9/2016 9:19:06 PM	R38566
Isopropylbenzene	14	1.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
4-Isopropyltoluene	2.9	1.4	10	J	µg/L	10	11/9/2016 9:19:06 PM	R38566
4-Methyl-2-pentanone	ND	4.3	100		µg/L	10	11/9/2016 9:19:06 PM	R38566
Methylene Chloride	ND	1.9	30		µg/L	10	11/9/2016 9:19:06 PM	R38566
n-Butylbenzene	6.5	1.6	30	J	µg/L	10	11/9/2016 9:19:06 PM	R38566
n-Propylbenzene	23	1.3	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
sec-Butylbenzene	5.0	1.2	10	J	µg/L	10	11/9/2016 9:19:06 PM	R38566
Styrene	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
tert-Butylbenzene	ND	1.2	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,1,1,2-Tetrachloroethane	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,1,2,2-Tetrachloroethane	ND	1.3	20		µg/L	10	11/9/2016 9:19:06 PM	R38566
Tetrachloroethene (PCE)	5.3	1.5	10	J	µg/L	10	11/9/2016 9:19:06 PM	R38566
trans-1,2-DCE	ND	4.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
trans-1,3-Dichloropropene	ND	1.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2,3-Trichlorobenzene	ND	1.1	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2,4-Trichlorobenzene	ND	1.3	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,1,1-Trichloroethane	42	0.91	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,1,2-Trichloroethane	ND	1.3	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Trichloroethene (TCE)	3.6	1.8	10	J	µg/L	10	11/9/2016 9:19:06 PM	R38566
Trichlorofluoromethane	ND	2.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
1,2,3-Trichloropropane	ND	2.0	20		µg/L	10	11/9/2016 9:19:06 PM	R38566
Vinyl chloride	ND	2.0	10		µg/L	10	11/9/2016 9:19:06 PM	R38566
Xylenes, Total	52	3.7	15		µg/L	10	11/9/2016 9:19:06 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-09

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 4:55:00 PM

Lab ID: 1611209-010

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	94.7	0	70-130		%Rec	10	11/9/2016 9:19:06 PM	R38566
Surr: 4-Bromofluorobenzene	83.8	0	70-130		%Rec	10	11/9/2016 9:19:06 PM	R38566
Surr: Dibromofluoromethane	101	0	70-130		%Rec	10	11/9/2016 9:19:06 PM	R38566
Surr: Toluene-d8	102	0	70-130		%Rec	10	11/9/2016 9:19:06 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-15

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 5:15:00 PM

Lab ID: 1611209-011

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	6.2	0.69	1.0		mg/L	1	11/9/2016 1:08:01 PM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 1:08:01 PM	28543
Surr: DNOP	105	0	77.1-144		%Rec	1	11/9/2016 1:08:01 PM	28543
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	110	5.1	10		mg/L	200	11/10/2016 12:41:13 PM	G38599
Surr: BFB	92.2	0	66.4-120		%Rec	200	11/10/2016 12:41:13 PM	G38599
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	ND	0.25	0.50		mg/L	5	11/4/2016 2:03:58 PM	R38478
Chloride	2800	25	250		mg/L	500	11/15/2016 6:24:32 PM	R38732
Nitrogen, Nitrite (As N)	ND	1.0	2.0		mg/L	20	11/4/2016 2:16:23 PM	R38478
Bromide	0.89	0.22	0.50		mg/L	5	11/4/2016 2:03:58 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 2:03:58 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 2:03:58 PM	R38478
Sulfate	ND	0.71	2.5		mg/L	5	11/4/2016 2:03:58 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	20	0.066	0.10	*	mg/L	50	11/28/2016 8:15:28 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 3:18:53 PM	B38985
Calcium	590	5.0	10		mg/L	10	11/28/2016 8:13:55 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 3:18:53 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 3:18:53 PM	B38985
Iron	26	1.0	1.0	*	mg/L	50	11/28/2016 8:15:28 PM	B38985
Magnesium	180	2.5	5.0		mg/L	5	11/28/2016 3:20:46 PM	B38985
Manganese	6.5	0.0032	0.020	*	mg/L	10	11/28/2016 8:13:55 PM	B38985
Potassium	3.4	0.50	1.0		mg/L	1	11/28/2016 3:18:53 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 3:18:53 PM	B38985
Sodium	1600	25	50		mg/L	50	11/28/2016 8:15:28 PM	B38985
Zinc	0.014	0.0028	0.010		mg/L	1	11/28/2016 3:18:53 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	22	0.040	0.10	*	mg/L	50	11/28/2016 10:42:17 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:55:15 AM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 11:55:15 AM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/21/2016 11:55:15 AM	28751
Iron	34	1.0	1.0	*	mg/L	50	11/28/2016 10:42:17 AM	28751
Manganese	6.8	0.0027	0.020	*	mg/L	10	11/28/2016 10:33:21 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:55:15 AM	28751
Zinc	0.028	0.0027	0.010		mg/L	1	11/28/2016 10:31:28 AM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-15

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 5:15:00 PM

Lab ID: 1611209-011

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

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	11/22/2016 3:01:43 PM	C38934
Lead	ND	0.00084	0.0025		mg/L	5	11/22/2016 3:01:43 PM	C38934
Selenium	0.0069	0.0021	0.010	J	mg/L	10	11/22/2016 3:04:46 PM	C38934
Uranium	ND	0.00026	0.0025		mg/L	5	11/22/2016 3:01:43 PM	C38934
200.8 ICPMS METALS:TOTAL								
							Analyst: JLF	
Arsenic	0.0037	0.0011	0.0050	J	mg/L	5	11/21/2016 5:37:20 PM	28751
Lead	0.0060	0.00041	0.0025		mg/L	5	11/21/2016 5:37:20 PM	28751
Selenium	0.0069	0.00094	0.0050		mg/L	5	11/21/2016 5:37:20 PM	28751
Uranium	ND	0.00087	0.0025		mg/L	5	11/21/2016 5:37:20 PM	28751
EPA METHOD 245.1: MERCURY								
							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 5:13:13 PM	28761
EPA METHOD 8270C: SEMIVOLATILES								
							Analyst: DAM	
Acenaphthene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Acenaphthylene	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Aniline	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Anthracene	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Azobenzene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Benz(a)anthracene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Benzo(a)pyrene	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Benzo(b)fluoranthene	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Benzo(g,h,i)perylene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Benzo(k)fluoranthene	ND	15	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Benzoic acid	65	13	100	J	µg/L	1	11/9/2016 7:21:31 PM	28498
Benzyl alcohol	ND	15	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Bis(2-chloroethoxy)methane	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Bis(2-chloroethyl)ether	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Bis(2-chloroisopropyl)ether	ND	9.5	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Bis(2-ethylhexyl)phthalate	35	13	50	J	µg/L	1	11/9/2016 7:21:31 PM	28498
4-Bromophenyl phenyl ether	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Butyl benzyl phthalate	13	12	50	J	µg/L	1	11/9/2016 7:21:31 PM	28498
Carbazole	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
4-Chloro-3-methylphenol	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
4-Chloroaniline	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2-Chloronaphthalene	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2-Chlorophenol	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
4-Chlorophenyl phenyl ether	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Chrysene	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Di-n-butyl phthalate	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498

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-15

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 5:15:00 PM

Lab ID: 1611209-011

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	36	9.9	50	J	µg/L	1	11/9/2016 7:21:31 PM	28498
Dibenz(a,h)anthracene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Dibenzofuran	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
1,2-Dichlorobenzene	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
1,3-Dichlorobenzene	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
1,4-Dichlorobenzene	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
3,3'-Dichlorobenzidine	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Diethyl phthalate	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Dimethyl phthalate	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2,4-Dichlorophenol	ND	12	100		µg/L	1	11/9/2016 7:21:31 PM	28498
2,4-Dimethylphenol	79	15	50		µg/L	1	11/9/2016 7:21:31 PM	28498
4,6-Dinitro-2-methylphenol	ND	9.0	100		µg/L	1	11/9/2016 7:21:31 PM	28498
2,4-Dinitrophenol	ND	14	100		µg/L	1	11/9/2016 7:21:31 PM	28498
2,4-Dinitrotoluene	ND	16	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2,6-Dinitrotoluene	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Fluoranthene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Fluorene	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Hexachlorobenzene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Hexachlorobutadiene	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Hexachlorocyclopentadiene	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Hexachloroethane	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Indeno(1,2,3-cd)pyrene	ND	15	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Isophorone	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
1-Methylnaphthalene	ND	15	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2-Methylnaphthalene	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2-Methylphenol	460	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
3+4-Methylphenol	550	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
N-Nitrosodi-n-propylamine	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
N-Nitrosodimethylamine	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
N-Nitrosodiphenylamine	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Naphthalene	59	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2-Nitroaniline	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
3-Nitroaniline	ND	15	50		µg/L	1	11/9/2016 7:21:31 PM	28498
4-Nitroaniline	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Nitrobenzene	ND	14	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2-Nitrophenol	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
4-Nitrophenol	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Pentachlorophenol	ND	12	100		µg/L	1	11/9/2016 7:21:31 PM	28498
Phenanthrene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-15

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 5:15:00 PM

Lab ID: 1611209-011

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	2000	50	250		µg/L	5	11/16/2016 4:41:53 PM	28498
Pyrene	ND	15	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Pyridine	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
1,2,4-Trichlorobenzene	ND	13	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2,4,5-Trichlorophenol	ND	11	50		µg/L	1	11/9/2016 7:21:31 PM	28498
2,4,6-Trichlorophenol	ND	12	50		µg/L	1	11/9/2016 7:21:31 PM	28498
Surr: 2-Fluorophenol	18.1	0	15-98.1		%Rec	1	11/9/2016 7:21:31 PM	28498
Surr: Phenol-d5	19.0	0	15-80.7		%Rec	1	11/9/2016 7:21:31 PM	28498
Surr: 2,4,6-Tribromophenol	35.2	0	15-112		%Rec	1	11/9/2016 7:21:31 PM	28498
Surr: Nitrobenzene-d5	57.0	0	27.2-90.7		%Rec	1	11/9/2016 7:21:31 PM	28498
Surr: 2-Fluorobiphenyl	44.1	0	23.3-85.6		%Rec	1	11/9/2016 7:21:31 PM	28498
Surr: 4-Terphenyl-d14	37.3	0	27.6-107		%Rec	1	11/9/2016 7:21:31 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	20000	48	500		µg/L	500	11/10/2016 12:40:14 AM	R38566
Toluene	16000	59	500		µg/L	500	11/10/2016 12:40:14 AM	R38566
Ethylbenzene	2100	5.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Methyl tert-butyl ether (MTBE)	99	11	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2,4-Trimethylbenzene	630	5.5	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,3,5-Trimethylbenzene	190	5.8	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2-Dichloroethane (EDC)	ND	5.8	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2-Dibromoethane (EDB)	ND	5.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Naphthalene	94	4.6	100	J	µg/L	50	11/10/2016 1:08:59 AM	R38566
1-Methylnaphthalene	ND	10	200		µg/L	50	11/10/2016 1:08:59 AM	R38566
2-Methylnaphthalene	ND	7.9	200		µg/L	50	11/10/2016 1:08:59 AM	R38566
Acetone	400	250	500	J	µg/L	50	11/10/2016 1:08:59 AM	R38566
Bromobenzene	ND	4.9	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Bromodichloromethane	ND	7.0	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Bromoform	ND	5.1	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Bromomethane	ND	39	150		µg/L	50	11/10/2016 1:08:59 AM	R38566
2-Butanone	660	37	500		µg/L	50	11/10/2016 1:08:59 AM	R38566
Carbon disulfide	ND	30	500		µg/L	50	11/10/2016 1:08:59 AM	R38566
Carbon Tetrachloride	ND	5.4	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Chlorobenzene	ND	5.7	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Chloroethane	ND	9.6	100		µg/L	50	11/10/2016 1:08:59 AM	R38566
Chloroform	ND	4.4	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Chloromethane	ND	11	150		µg/L	50	11/10/2016 1:08:59 AM	R38566
2-Chlorotoluene	ND	20	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
4-Chlorotoluene	ND	6.4	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
cis-1,2-DCE	ND	6.2	50		µg/L	50	11/10/2016 1:08:59 AM	R38566

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-15

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016 5:15:00 PM

Lab ID: 1611209-011

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	5.3	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2-Dibromo-3-chloropropane	ND	12	100		µg/L	50	11/10/2016 1:08:59 AM	R38566
Dibromochloromethane	ND	4.3	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Dibromomethane	ND	6.0	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2-Dichlorobenzene	ND	20	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,3-Dichlorobenzene	ND	7.2	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,4-Dichlorobenzene	ND	7.1	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Dichlorodifluoromethane	ND	18	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,1-Dichloroethane	ND	5.4	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,1-Dichloroethene	ND	5.4	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2-Dichloropropane	ND	5.5	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,3-Dichloropropane	ND	7.8	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
2,2-Dichloropropane	ND	8.3	100		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,1-Dichloropropene	ND	6.7	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Hexachlorobutadiene	ND	9.9	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
2-Hexanone	ND	42	500		µg/L	50	11/10/2016 1:08:59 AM	R38566
Isopropylbenzene	120	5.2	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
4-Isopropyltoluene	17	7.0	50	J	µg/L	50	11/10/2016 1:08:59 AM	R38566
4-Methyl-2-pentanone	60	21	500	J	µg/L	50	11/10/2016 1:08:59 AM	R38566
Methylene Chloride	ND	9.4	150		µg/L	50	11/10/2016 1:08:59 AM	R38566
n-Butylbenzene	19	8.0	150	J	µg/L	50	11/10/2016 1:08:59 AM	R38566
n-Propylbenzene	150	6.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
sec-Butylbenzene	23	6.2	50	J	µg/L	50	11/10/2016 1:08:59 AM	R38566
Styrene	ND	5.5	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
tert-Butylbenzene	ND	5.8	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,1,1,2-Tetrachloroethane	ND	5.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,1,2,2-Tetrachloroethane	ND	6.4	100		µg/L	50	11/10/2016 1:08:59 AM	R38566
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
trans-1,2-DCE	ND	20	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
trans-1,3-Dichloropropene	ND	5.2	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2,3-Trichlorobenzene	ND	5.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2,4-Trichlorobenzene	ND	6.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,1,1-Trichloroethane	ND	4.6	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,1,2-Trichloroethane	ND	6.4	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Trichloroethene (TCE)	ND	8.8	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
Trichlorofluoromethane	ND	10	50		µg/L	50	11/10/2016 1:08:59 AM	R38566
1,2,3-Trichloropropane	ND	10	100		µg/L	50	11/10/2016 1:08:59 AM	R38566
Vinyl chloride	24	9.8	50	J	µg/L	50	11/10/2016 1:08:59 AM	R38566
Xylenes, Total	7600	18	75		µg/L	50	11/10/2016 1:08:59 AM	R38566

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
Project: 2016 4th QTR (MKTF)
Lab ID: 1611209-011
Client Sample ID: MKTF-15
Collection Date: 11/2/2016 5:15:00 PM
Matrix: AQUEOUS
Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	94.5	0	70-130		%Rec	50	11/10/2016 1:08:59 AM	R38566
Surr: 4-Bromofluorobenzene	89.9	0	70-130		%Rec	50	11/10/2016 1:08:59 AM	R38566
Surr: Dibromofluoromethane	105	0	70-130		%Rec	50	11/10/2016 1:08:59 AM	R38566
Surr: Toluene-d8	101	0	70-130		%Rec	50	11/10/2016 1:08:59 AM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016

Lab ID: 1611209-012

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: TOM	
Diesel Range Organics (DRO)	1.5	0.69	1.0		mg/L	1	11/9/2016 1:29:30 PM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 1:29:30 PM	28543
Surr: DNOP	107	0	77.1-144		%Rec	1	11/9/2016 1:29:30 PM	28543
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB	
Gasoline Range Organics (GRO)	28	2.5	5.0		mg/L	100	11/9/2016 8:48:10 PM	G38568
Surr: BFB	91.3	0	66.4-120		%Rec	100	11/9/2016 8:48:10 PM	G38568
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Fluoride	ND	0.25	0.50		mg/L	5	11/4/2016 3:19:28 PM	R38478
Chloride	860	5.1	50		mg/L	100	11/15/2016 6:36:57 PM	R38732
Nitrogen, Nitrite (As N)	ND	0.26	0.50		mg/L	5	11/4/2016 3:19:28 PM	R38478
Bromide	0.78	0.22	0.50		mg/L	5	11/4/2016 3:19:28 PM	R38478
Nitrogen, Nitrate (As N)	ND	0.20	0.50		mg/L	5	11/4/2016 3:19:28 PM	R38478
Phosphorus, Orthophosphate (As P)	ND	0.38	2.5		mg/L	5	11/4/2016 3:19:28 PM	R38478
Sulfate	2.1	0.71	2.5	J	mg/L	5	11/4/2016 3:19:28 PM	R38478
EPA METHOD 200.7: DISSOLVED METALS							Analyst: MED	
Barium	2.6	0.0066	0.010	*	mg/L	5	11/28/2016 3:24:21 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 3:22:28 PM	B38985
Calcium	170	2.5	5.0		mg/L	5	11/28/2016 3:24:21 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 3:22:28 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 3:22:28 PM	B38985
Iron	5.2	0.20	0.20	*	mg/L	10	11/28/2016 8:17:28 PM	B38985
Magnesium	47	0.50	1.0		mg/L	1	11/28/2016 3:22:28 PM	B38985
Manganese	3.9	0.0016	0.010	*	mg/L	5	11/28/2016 3:24:21 PM	B38985
Potassium	1.3	0.50	1.0		mg/L	1	11/28/2016 3:22:28 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 3:22:28 PM	B38985
Sodium	780	5.0	10		mg/L	10	11/28/2016 8:17:28 PM	B38985
Zinc	0.0032	0.0028	0.010	J	mg/L	1	11/28/2016 3:22:28 PM	B38985
EPA METHOD 200.7: TOTAL METALS							Analyst: MED	
Barium	2.8	0.0079	0.020	*	mg/L	10	11/28/2016 10:46:07 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:57:05 AM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 11:57:05 AM	28751
Copper	ND	0.0030	0.0060		mg/L	1	11/21/2016 11:57:05 AM	28751
Iron	8.2	0.20	0.20	*	mg/L	10	11/28/2016 10:46:07 AM	28751
Manganese	4.0	0.0027	0.020	*	mg/L	10	11/28/2016 10:46:07 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:57:05 AM	28751
Zinc	0.012	0.0027	0.010		mg/L	1	11/28/2016 10:44:15 AM	28751

EPA 200.8: DISSOLVED METALS

Analyst: **JLF**

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016

Lab ID: 1611209-012

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.013	0.00014	0.0010	*	mg/L	1	11/18/2016 7:29:51 PM	B38851
Lead	ND	0.00017	0.00050		mg/L	1	11/18/2016 7:29:51 PM	B38851
Selenium	0.0045	0.00021	0.0010		mg/L	1	11/18/2016 7:29:51 PM	B38851
Uranium	0.0058	0.000051	0.00050		mg/L	1	11/18/2016 7:29:51 PM	B38851
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.014	0.00021	0.0010	*	mg/L	1	11/21/2016 5:49:25 PM	28751
Lead	0.00098	0.000081	0.00050		mg/L	1	11/18/2016 4:06:04 PM	28751
Selenium	0.0054	0.0019	0.010	J	mg/L	10	11/21/2016 5:52:26 PM	28751
Uranium	0.0068	0.00017	0.00050		mg/L	1	11/18/2016 4:06:04 PM	28751
EPA METHOD 245.1: MERCURY							Analyst: JLF	
Mercury	ND	0.000053	0.00020		mg/L	1	11/18/2016 5:14:59 PM	28761
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Aniline	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Benzoic acid	18	2.6	20	J	µg/L	1	11/9/2016 7:49:02 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Bis(2-ethylhexyl)phthalate	6.7	2.6	10	J	µg/L	1	11/9/2016 7:49:02 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Carbazole	2.4	2.3	10	J	µg/L	1	11/9/2016 7:49:02 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 7:49:02 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498

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

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	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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	R	RPD outside accepted recovery limits	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: DUP04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016

Lab ID: 1611209-012

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	8.5	2.0	10	J	µg/L	1	11/9/2016 7:49:02 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 7:49:02 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 7:49:02 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 7:49:02 PM	28498
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 7:49:02 PM	28498
2,4-Dimethylphenol	24	3.0	10		µg/L	1	11/9/2016 7:49:02 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 7:49:02 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 7:49:02 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Fluorene	ND	2.7	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
1-Methylnaphthalene	14	2.9	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2-Methylnaphthalene	8.2	2.9	10	J	µg/L	1	11/9/2016 7:49:02 PM	28498
2-Methylphenol	80	2.5	10		µg/L	1	11/9/2016 7:49:02 PM	28498
3+4-Methylphenol	66	2.3	10		µg/L	1	11/9/2016 7:49:02 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 7:49:02 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Naphthalene	30	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 7:49:02 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 7:49:02 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 7:49:02 PM	28498
Phenanthrene	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016

Lab ID: 1611209-012

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	33	2.0	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 7:49:02 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 7:49:02 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 7:49:02 PM	28498
Surr: 2-Fluorophenol	23.2	0	15-98.1		%Rec	1	11/9/2016 7:49:02 PM	28498
Surr: Phenol-d5	23.5	0	15-80.7		%Rec	1	11/9/2016 7:49:02 PM	28498
Surr: 2,4,6-Tribromophenol	47.4	0	15-112		%Rec	1	11/9/2016 7:49:02 PM	28498
Surr: Nitrobenzene-d5	71.8	0	27.2-90.7		%Rec	1	11/9/2016 7:49:02 PM	28498
Surr: 2-Fluorobiphenyl	58.6	0	23.3-85.6		%Rec	1	11/9/2016 7:49:02 PM	28498
Surr: 4-Terphenyl-d14	41.7	0	27.6-107		%Rec	1	11/9/2016 7:49:02 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	3600	4.8	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Toluene	4500	5.9	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Ethylbenzene	510	5.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Methyl tert-butyl ether (MTBE)	68	11	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2,4-Trimethylbenzene	240	5.5	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,3,5-Trimethylbenzene	49	5.8	50	J	µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2-Dichloroethane (EDC)	ND	5.8	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2-Dibromoethane (EDB)	ND	5.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Naphthalene	48	4.6	100	J	µg/L	50	11/10/2016 2:35:11 AM	R38566
1-Methylnaphthalene	ND	10	200		µg/L	50	11/10/2016 2:35:11 AM	R38566
2-Methylnaphthalene	ND	7.9	200		µg/L	50	11/10/2016 2:35:11 AM	R38566
Acetone	ND	250	500		µg/L	50	11/10/2016 2:35:11 AM	R38566
Bromobenzene	ND	4.9	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Bromodichloromethane	ND	7.0	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Bromoform	ND	5.1	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Bromomethane	ND	39	150		µg/L	50	11/10/2016 2:35:11 AM	R38566
2-Butanone	ND	37	500		µg/L	50	11/10/2016 2:35:11 AM	R38566
Carbon disulfide	ND	30	500		µg/L	50	11/10/2016 2:35:11 AM	R38566
Carbon Tetrachloride	ND	5.4	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Chlorobenzene	ND	5.7	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Chloroethane	ND	9.6	100		µg/L	50	11/10/2016 2:35:11 AM	R38566
Chloroform	ND	4.4	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Chloromethane	ND	11	150		µg/L	50	11/10/2016 2:35:11 AM	R38566
2-Chlorotoluene	ND	20	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
4-Chlorotoluene	ND	6.4	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
cis-1,2-DCE	ND	6.2	50		µg/L	50	11/10/2016 2:35:11 AM	R38566

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: DUP04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016

Lab ID: 1611209-012

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	5.3	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2-Dibromo-3-chloropropane	ND	12	100		µg/L	50	11/10/2016 2:35:11 AM	R38566
Dibromochloromethane	ND	4.3	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Dibromomethane	ND	6.0	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2-Dichlorobenzene	ND	20	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,3-Dichlorobenzene	ND	7.2	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,4-Dichlorobenzene	ND	7.1	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Dichlorodifluoromethane	ND	18	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,1-Dichloroethane	54	5.4	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,1-Dichloroethene	ND	5.4	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2-Dichloropropane	ND	5.5	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,3-Dichloropropane	ND	7.8	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
2,2-Dichloropropane	ND	8.3	100		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,1-Dichloropropene	ND	6.7	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Hexachlorobutadiene	ND	9.9	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
2-Hexanone	ND	42	500		µg/L	50	11/10/2016 2:35:11 AM	R38566
Isopropylbenzene	21	5.2	50	J	µg/L	50	11/10/2016 2:35:11 AM	R38566
4-Isopropyltoluene	ND	7.0	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
4-Methyl-2-pentanone	26	21	500	J	µg/L	50	11/10/2016 2:35:11 AM	R38566
Methylene Chloride	ND	9.4	150		µg/L	50	11/10/2016 2:35:11 AM	R38566
n-Butylbenzene	16	8.0	150	J	µg/L	50	11/10/2016 2:35:11 AM	R38566
n-Propylbenzene	54	6.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
sec-Butylbenzene	16	6.2	50	J	µg/L	50	11/10/2016 2:35:11 AM	R38566
Styrene	ND	5.5	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
tert-Butylbenzene	ND	5.8	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,1,1,2-Tetrachloroethane	ND	5.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,1,2,2-Tetrachloroethane	ND	6.4	100		µg/L	50	11/10/2016 2:35:11 AM	R38566
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
trans-1,2-DCE	ND	20	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
trans-1,3-Dichloropropene	ND	5.2	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2,3-Trichlorobenzene	ND	5.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2,4-Trichlorobenzene	ND	6.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,1,1-Trichloroethane	ND	4.6	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,1,2-Trichloroethane	ND	6.4	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Trichloroethene (TCE)	ND	8.8	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Trichlorofluoromethane	ND	10	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
1,2,3-Trichloropropane	ND	10	100		µg/L	50	11/10/2016 2:35:11 AM	R38566
Vinyl chloride	50	9.8	50		µg/L	50	11/10/2016 2:35:11 AM	R38566
Xylenes, Total	1500	18	75		µg/L	50	11/10/2016 2:35:11 AM	R38566

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

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

Analytical Report

Lab Order 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: DUP04

Project: 2016 4th QTR (MKTF)

Collection Date: 11/2/2016

Lab ID: 1611209-012

Matrix: AQUEOUS

Received Date: 11/3/2016 4:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	96.5	0	70-130		%Rec	50	11/10/2016 2:35:11 AM	R38566
Surr: 4-Bromofluorobenzene	94.9	0	70-130		%Rec	50	11/10/2016 2:35:11 AM	R38566
Surr: Dibromofluoromethane	105	0	70-130		%Rec	50	11/10/2016 2:35:11 AM	R38566
Surr: Toluene-d8	104	0	70-130		%Rec	50	11/10/2016 2:35:11 AM	R38566

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: TRIP BLANK

Project: 2016 4th QTR (MKTF)

Collection Date:

Lab ID: 1611209-013

Matrix: TRIP BLANK

Received Date: 11/3/2016 4:55:00 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	11/9/2016 1:09:43 PM	R38566
Toluene	ND	0.12	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Ethylbenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Naphthalene	ND	0.093	2.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Acetone	7.7	4.9	10	J	µg/L	1	11/9/2016 1:09:43 PM	R38566
Bromobenzene	ND	0.098	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Bromoform	ND	0.10	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Bromomethane	ND	0.78	3.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
2-Butanone	ND	0.74	10		µg/L	1	11/9/2016 1:09:43 PM	R38566
Carbon disulfide	ND	0.60	10		µg/L	1	11/9/2016 1:09:43 PM	R38566
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Chlorobenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Chloroethane	ND	0.19	2.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Chloroform	ND	0.089	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Chloromethane	ND	0.21	3.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
cis-1,3-Dichloropropene	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Dibromomethane	ND	0.12	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/9/2016 1:09:43 PM	R38566

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 1611209

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2016 4th QTR (MKTF)

Collection Date:

Lab ID: 1611209-013

Matrix: TRIP BLANK

Received Date: 11/3/2016 4:55:00 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	11/9/2016 1:09:43 PM	R38566
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
2-Hexanone	ND	0.84	10		µg/L	1	11/9/2016 1:09:43 PM	R38566
Isopropylbenzene	ND	0.10	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/9/2016 1:09:43 PM	R38566
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
n-Butylbenzene	ND	0.16	3.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
n-Propylbenzene	ND	0.13	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
sec-Butylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Styrene	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
tert-Butylbenzene	ND	0.12	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/9/2016 1:09:43 PM	R38566
Xylenes, Total	ND	0.37	1.5		µg/L	1	11/9/2016 1:09:43 PM	R38566
Surr: 1,2-Dichloroethane-d4	96.8	0	70-130		%Rec	1	11/9/2016 1:09:43 PM	R38566
Surr: 4-Bromofluorobenzene	91.4	0	70-130		%Rec	1	11/9/2016 1:09:43 PM	R38566
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	11/9/2016 1:09:43 PM	R38566
Surr: Toluene-d8	103	0	70-130		%Rec	1	11/9/2016 1:09:43 PM	R38566

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#: 1611209

13-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: B38985		RunNo: 38985							
Prep Date:	Analysis Date: 11/28/2016		SeqNo: 1219566		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID LCS-B	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: B38985		RunNo: 38985							
Prep Date:	Analysis Date: 11/28/2016		SeqNo: 1219567		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.1	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.4	85	115			
Calcium	48	1.0	50.00	0	95.2	85	115			
Chromium	0.47	0.0060	0.5000	0	93.9	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.46	0.020	0.5000	0	91.1	85	115			
Magnesium	49	1.0	50.00	0	98.1	85	115			
Manganese	0.46	0.0020	0.5000	0	92.3	85	115			
Potassium	50	1.0	50.00	0	99.6	85	115			
Silver	0.099	0.0050	0.1000	0	99.4	85	115			
Sodium	49	1.0	50.00	0	98.6	85	115			
Zinc	0.46	0.010	0.5000	0	92.8	85	115			

Sample ID LLCS-B	SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: B38985		RunNo: 38985							
Prep Date:	Analysis Date: 11/28/2016		SeqNo: 1219568		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	94.0	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	103	50	150			
Calcium	0.47	1.0	0.5000	0	93.7	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.8	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#: 1611209

13-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: B38985			RunNo: 38985				
Prep Date:			Analysis Date: 11/28/2016			SeqNo: 1219568		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0074	0.0060	0.006000	0	124	50	150			
Iron	0.019	0.020	0.02000	0	96.6	50	150			J
Magnesium	0.50	1.0	0.5000	0	99.5	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.61	1.0	0.5000	0	123	50	150			J
Silver	0.0049	0.0050	0.005000	0	98.8	50	150			J
Sodium	0.49	1.0	0.5000	0	97.6	50	150			J
Zinc	0.0052	0.010	0.005000	0	104	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID MB-28751	SampType: MBLK		TestCode: EPA Method 200.7: Total Metals							
Client ID: PBW	Batch ID: 28751		RunNo: 38846							
Prep Date: 11/18/2016	Analysis Date: 11/19/2016		SeqNo: 1214021		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID LCS-28751	SampType: LCS		TestCode: EPA Method 200.7: Total Metals							
Client ID: LCSW	Batch ID: 28751		RunNo: 38846							
Prep Date: 11/18/2016	Analysis Date: 11/19/2016		SeqNo: 1214022		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.5	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.2	85	115			
Chromium	0.47	0.0060	0.5000	0	94.4	85	115			
Copper	0.47	0.0060	0.5000	0	94.5	85	115			
Iron	0.47	0.020	0.5000	0	94.2	85	115			
Manganese	0.47	0.0020	0.5000	0	93.1	85	115			
Silver	0.098	0.0050	0.1000	0	97.6	85	115			
Zinc	0.46	0.010	0.5000	0	93.0	85	115			

Sample ID LLCS-28751	SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals							
Client ID: BatchQC	Batch ID: 28751		RunNo: 38846							
Prep Date: 11/18/2016	Analysis Date: 11/19/2016		SeqNo: 1214023		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	103	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.8	50	150			J
Copper	0.0054	0.0060	0.006000	0	90.0	50	150			J
Iron	0.023	0.020	0.02000	0	117	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Zinc	0.0055	0.010	0.005000	0	111	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611209

13-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: A38851				RunNo: 38851					
Prep Date:	Analysis Date: 11/18/2016				SeqNo: 1214205		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.2	85	115			
Lead	0.012	0.00050	0.01250	0	93.1	85	115			
Selenium	0.024	0.0010	0.02500	0	95.6	85	115			
Uranium	0.012	0.00050	0.01250	0	93.6	85	115			

Sample ID LCS	SampType: LCS				TestCode: EPA 200.8: Dissolved Metals					
Client ID: LCSW	Batch ID: B38851				RunNo: 38851					
Prep Date:	Analysis Date: 11/18/2016				SeqNo: 1214206		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.8	85	115			
Lead	0.012	0.00050	0.01250	0	92.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.012	0.00050	0.01250	0	93.0	85	115			

Sample ID LLLCS	SampType: LCSLL				TestCode: EPA 200.8: Dissolved Metals					
Client ID: BatchQC	Batch ID: A38851				RunNo: 38851					
Prep Date:	Analysis Date: 11/18/2016				SeqNo: 1214207		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	97.5	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.2	50	150			J
Selenium	0.00099	0.0010	0.001000	0	99.4	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	95.0	50	150			J

Sample ID LLLCS	SampType: LCSLL				TestCode: EPA 200.8: Dissolved Metals					
Client ID: BatchQC	Batch ID: B38851				RunNo: 38851					
Prep Date:	Analysis Date: 11/18/2016				SeqNo: 1214208		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.7	50	150			J
Selenium	0.00098	0.0010	0.001000	0	97.5	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID MB	SampType: MBLK				TestCode: EPA 200.8: Dissolved Metals					
Client ID: PBW	Batch ID: A38851				RunNo: 38851					
Prep Date:	Analysis Date: 11/18/2016				SeqNo: 1214209		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#: 1611209

13-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: A38851		RunNo: 38851							
Prep Date:	Analysis Date: 11/18/2016		SeqNo: 1214209		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 MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: B38851		RunNo: 38851							
Prep Date:	Analysis Date: 11/18/2016		SeqNo: 1214210		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 1611375-002MSLL	SampType: MS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: BatchQC	Batch ID: C38934		RunNo: 38934							
Prep Date:	Analysis Date: 11/22/2016		SeqNo: 1217191		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.11	0.0025	0.06250	0.04376	112	70	130			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: B38934		RunNo: 38934							
Prep Date:	Analysis Date: 11/22/2016		SeqNo: 1217204		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.3	85	115			
Uranium	0.012	0.00050	0.01250	0	97.2	85	115			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: C38934		RunNo: 38934							
Prep Date:	Analysis Date: 11/22/2016		SeqNo: 1217205		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.2	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.025	0.0010	0.02500	0	101	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#: 1611209

13-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: C38934			RunNo: 38934						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217205		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	99.3	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: B38934			RunNo: 38934						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217207		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	91.5	50	150			J
Lead	0.00050	0.00050	0.0005000	0	100	50	150			
Selenium	0.00087	0.0010	0.001000	0	87.4	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.2	50	150			J

Sample ID LLLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: C38934			RunNo: 38934						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217208		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	98.9	50	150			J
Lead	0.00050	0.00050	0.0005000	0	100	50	150			J
Selenium	0.0010	0.0010	0.001000	0	99.5	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.5	50	150			J

Sample ID MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID: PBW	Batch ID: B38934			RunNo: 38934						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217210		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 MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID: PBW	Batch ID: C38934			RunNo: 38934						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217211		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								

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | 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#: 1611209

13-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:	C38934	RunNo:	38934					
Prep Date:		Analysis Date:	11/22/2016	SeqNo:	1217211	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28751		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	28751		RunNo:	38823			
Prep Date:	11/18/2016		Analysis Date:	11/18/2016		SeqNo:	1213065	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-28751		SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW		Batch ID:	28751		RunNo:	38823			
Prep Date:	11/18/2016		Analysis Date:	11/18/2016		SeqNo:	1213066	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	98.0	85	115			
Lead	0.012	0.00050	0.01250	0	99.0	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.012	0.00050	0.01250	0	98.0	85	115			

Sample ID	MSLLLCS-28751		SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	BatchQC		Batch ID:	28751		RunNo:	38823			
Prep Date:	11/18/2016		Analysis Date:	11/18/2016		SeqNo:	1213067	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	95.7	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Selenium	0.00093	0.0010	0.001000	0	93.4	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.6	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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28761		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 28761		RunNo: 38840					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213746		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-28761		SampType: LCS		TestCode: EPA Method 245.1: Mercury					
Client ID:	LCSW		Batch ID: 28761		RunNo: 38840					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213747		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.0	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611209

13-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: R38478		RunNo: 38478							
Prep Date:	Analysis Date: 11/4/2016		SeqNo: 1201657		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								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R38478		RunNo: 38478							
Prep Date:	Analysis Date: 11/4/2016		SeqNo: 1201658		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.9	90	110			
Bromide	2.5	0.10	2.500	0	98.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	90	110			
Sulfate	9.9	0.50	10.00	0	98.9	90	110			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R38732		RunNo: 38732							
Prep Date:	Analysis Date: 11/15/2016		SeqNo: 1210192		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R38732		RunNo: 38732							
Prep Date:	Analysis Date: 11/15/2016		SeqNo: 1210193		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.7	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	LCS-28516		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 28516		RunNo: 38494					
Prep Date:	11/7/2016		Analysis Date: 11/8/2016		SeqNo: 1203999		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	90.8	63.2	155			
Surr: DNOP	0.51		0.5000		102	77.1	144			

Sample ID	MB-28516		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW		Batch ID: 28516		RunNo: 38494					
Prep Date:	11/7/2016		Analysis Date: 11/8/2016		SeqNo: 1204000		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			

Sample ID	1611209-006BMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	MKTF-11		Batch ID: 28543		RunNo: 38562					
Prep Date:	11/8/2016		Analysis Date: 11/9/2016		SeqNo: 1204855		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	1.609	87.9	79.6	148			
Surr: DNOP	0.54		0.5000		107	77.1	144			

Sample ID	1611209-006BMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range				
Client ID:	MKTF-11		Batch ID:	28543		RunNo:	38562				
Prep Date:	11/8/2016		Analysis Date:	11/9/2016		SeqNo:	1204856		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	6.2	1.0	5.000	1.609	91.9	79.6	148	3.21	20		
Surr: DNOP	0.53		0.5000		106	77.1	144	0	0		

Sample ID	LCS-28543		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 28543		RunNo: 38562					
Prep Date:	11/8/2016		Analysis Date: 11/9/2016		SeqNo: 1204865		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	94.0	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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	MB-28543		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range			
Client ID:	PBW		Batch ID:	28543		RunNo:	38562			
Prep Date:	11/8/2016		Analysis Date:	11/9/2016		SeqNo:	1204866		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		101	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#: 1611209

13-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: G38568			RunNo: 38568						
Prep Date:	Analysis Date: 11/9/2016			SeqNo: 1205252			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.1	66.4	120			

Sample ID 2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSW	Batch ID: G38568			RunNo: 38568						
Prep Date:	Analysis Date: 11/9/2016			SeqNo: 1205253			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	91.2	80	120			
Surr: BFB	18		20.00		92.0	66.4	120			

Sample ID 1611209-001AMS	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: MKTF-21	Batch ID: G38568			RunNo: 38568						
Prep Date:	Analysis Date: 11/9/2016			SeqNo: 1205261			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	73	5.0	50.00	34.22	77.5	64.8	129			
Surr: BFB	1800		2000		91.5	66.4	120			

Sample ID 1611209-001AMSD	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: MKTF-21	Batch ID: G38568			RunNo: 38568						
Prep Date:	Analysis Date: 11/9/2016			SeqNo: 1205262			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	74	5.0	50.00	34.22	78.8	64.8	129	0.901	20	
Surr: BFB	1900		2000		93.4	66.4	120	0	0	

Sample ID RB	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBW	Batch ID: G38599			RunNo: 38599						
Prep Date:	Analysis Date: 11/10/2016			SeqNo: 1206149			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		89.5	66.4	120			

Sample ID 2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSW	Batch ID: G38599			RunNo: 38599						
Prep Date:	Analysis Date: 11/10/2016			SeqNo: 1206150			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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	G38599	RunNo:	38599					
Prep Date:		Analysis Date:	11/10/2016	SeqNo:	1206150	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	92.4	80	120			
Surr: BFB	19		20.00		94.8	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#: 1611209

13-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: R38566			RunNo: 38566					
Prep Date:		Analysis Date: 11/9/2016			SeqNo: 1204743		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	21	1.0	20.00	0	103	70	130			
Chlorobenzene	19	1.0	20.00	0	95.4	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R38566			RunNo: 38566					
Prep Date:		Analysis Date: 11/9/2016			SeqNo: 1204744		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611209

13-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: R38566			RunNo: 38566					
Prep Date:		Analysis Date: 11/9/2016			SeqNo: 1204744	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#: 1611209

13-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:	R38566	RunNo:	38566					
Prep Date:		Analysis Date:	11/9/2016	SeqNo:	1204744	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	9.5		10.00		95.0	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.
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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	Ics-28498	SampType: LCS			TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW	Batch ID: 28498			RunNo: 38590					
Prep Date:	11/7/2016	Analysis Date: 11/9/2016			SeqNo: 1205303		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	65.8	42.9	100			
4-Chloro-3-methylphenol	160	10	200.0	0	81.4	36.2	110			
2-Chlorophenol	140	10	200.0	0	72.3	33.4	97.8			
1,4-Dichlorobenzene	53	10	100.0	0	52.9	32.8	79.3			
2,4-Dinitrotoluene	63	10	100.0	0	62.8	34.9	107			
N-Nitrosodi-n-propylamine	71	10	100.0	0	71.1	30.7	111			
4-Nitrophenol	100	10	200.0	0	50.6	15	91.9			
Pentachlorophenol	110	20	200.0	0	56.9	33.3	93.5			
Phenol	110	10	200.0	0	57.2	20.9	86.4			
Pyrene	68	10	100.0	0	68.2	45.6	111			
1,2,4-Trichlorobenzene	63	10	100.0	0	62.8	38.7	88.2			
Surr: 2-Fluorophenol	120		200.0		61.2	15	98.1			
Surr: Phenol-d5	110		200.0		57.2	15	80.7			
Surr: 2,4,6-Tribromophenol	130		200.0		65.7	15	112			
Surr: Nitrobenzene-d5	71		100.0		71.2	27.2	90.7			
Surr: 2-Fluorobiphenyl	64		100.0		64.5	23.3	85.6			
Surr: 4-Terphenyl-d14	60		100.0		59.5	27.6	107			

Sample ID	Icsd-28498		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 28498		RunNo: 38590					
Prep Date:	11/7/2016		Analysis Date: 11/9/2016		SeqNo: 1205304		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.2	42.9	100	0.886	0	
4-Chloro-3-methylphenol	140	10	200.0	0	71.7	36.2	110	12.7	0	
2-Chlorophenol	130	10	200.0	0	63.8	33.4	97.8	12.6	0	
1,4-Dichlorobenzene	55	10	100.0	0	54.9	32.8	79.3	3.60	0	
2,4-Dinitrotoluene	61	10	100.0	0	61.1	34.9	107	2.68	0	
N-Nitrosodi-n-propylamine	72	10	100.0	0	72.2	30.7	111	1.51	0	
4-Nitrophenol	93	10	200.0	0	46.5	15	91.9	8.57	0	
Pentachlorophenol	110	20	200.0	0	55.2	33.3	93.5	3.10	0	
Phenol	100	10	200.0	0	52.4	20.9	86.4	8.78	0	
Pyrene	65	10	100.0	0	64.7	45.6	111	5.30	0	
1,2,4-Trichlorobenzene	63	10	100.0	0	62.6	38.7	88.2	0.319	0	
Surr: 2-Fluorophenol	110		200.0		53.1	15	98.1	0	0	
Surr: Phenol-d5	110		200.0		53.4	15	80.7	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.1	15	112	0	0	
Surr: Nitrobenzene-d5	67		100.0		66.8	27.2	90.7	0	0	
Surr: 2-Fluorobiphenyl	60		100.0		59.5	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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	Icsd-28498		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 28498		RunNo: 38590					
Prep Date:	11/7/2016		Analysis Date: 11/9/2016		SeqNo: 1205304		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	57		100.0		57.5	27.6	107	0	0	

Sample ID	mb-28498		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28498		RunNo: 38590					
Prep Date:	11/7/2016		Analysis Date: 11/9/2016		SeqNo: 1205305		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	10	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	7.1	10								J
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	3.0	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	8.2	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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	mb-28498	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	28498	RunNo:	38590					
Prep Date:	11/7/2016	Analysis Date:	11/9/2016	SeqNo:	1205305	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	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								
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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID mb-28498	SampType: MBLK			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW	Batch ID: 28498			RunNo: 38590						
Prep Date: 11/7/2016	Analysis Date: 11/9/2016			SeqNo: 1205305		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	100		200.0		50.0	15	98.1			
Surr: Phenol-d5	87		200.0		43.7	15	80.7			
Surr: 2,4,6-Tribromophenol	160		200.0		80.8	15	112			
Surr: Nitrobenzene-d5	68		100.0		68.5	27.2	90.7			
Surr: 2-Fluorobiphenyl	65		100.0		65.3	23.3	85.6			
Surr: 4-Terphenyl-d14	72		100.0		71.9	27.6	107			

Sample ID lcs-28584	SampType: LCS			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: LCSW	Batch ID: 28584			RunNo: 38737						
Prep Date: 11/10/2016	Analysis Date: 11/15/2016			SeqNo: 1210297		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	76	10	100.0	0	75.5	42.9	100			
4-Chloro-3-methylphenol	170	10	200.0	0	86.0	36.2	110			
2-Chlorophenol	140	10	200.0	0	71.8	33.4	97.8			
1,4-Dichlorobenzene	61	10	100.0	0	60.9	32.8	79.3			
2,4-Dinitrotoluene	71	10	100.0	0	70.8	34.9	107			
N-Nitrosodi-n-propylamine	74	10	100.0	0	73.5	30.7	111			
4-Nitrophenol	120	10	200.0	0	61.3	15	91.9			
Pentachlorophenol	130	20	200.0	0	64.8	33.3	93.5			
Phenol	120	10	200.0	0	60.2	20.9	86.4			
Pyrene	66	10	100.0	0	66.1	45.6	111			
1,2,4-Trichlorobenzene	73	10	100.0	0	72.8	38.7	88.2			
Surr: 2-Fluorophenol	130		200.0		66.1	15	98.1			
Surr: Phenol-d5	130		200.0		63.4	15	80.7			
Surr: 2,4,6-Tribromophenol	160		200.0		79.1	15	112			
Surr: Nitrobenzene-d5	72		100.0		71.9	27.2	90.7			
Surr: 2-Fluorobiphenyl	72		100.0		72.2	23.3	85.6			
Surr: 4-Terphenyl-d14	67		100.0		67.3	27.6	107			

Sample ID mb-28584	SampType: MBLK			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW	Batch ID: 28584			RunNo: 38737						
Prep Date: 11/10/2016	Analysis Date: 11/15/2016			SeqNo: 1210298		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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	mb-28584		SampType:	MBLK		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	PBW		Batch ID:	28584		RunNo:	38737			
Prep Date:	11/10/2016		Analysis Date:	11/15/2016		SeqNo:	1210298		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	11	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	7.1	10								J
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	7.6	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								

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#: 1611209

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR (MKTF)

Sample ID	mb-28584		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28584		RunNo: 38737					
Prep Date:	11/10/2016		Analysis Date: 11/15/2016		SeqNo: 1210298		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	79		200.0		39.5	15	98.1			
Surr: Phenol-d5	61		200.0		30.4	15	80.7			
Surr: 2,4,6-Tribromophenol	110		200.0		56.8	15	112			
Surr: Nitrobenzene-d5	55		100.0		54.7	27.2	90.7			
Surr: 2-Fluorobiphenyl	45		100.0		45.2	23.3	85.6			
Surr: 4-Terphenyl-d14	52		100.0		51.9	27.6	107			

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: 1611209

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

11/3/2016 4:55:00 PM

Completed By: Ashley Gallegos

11/3/2016 5:50:11 PM

Reviewed By:

Chain of Custody

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

Log In

- | | | | |
|---|-------|------|---|
| 4. Was an attempt made to cool the samples? | Yes ✓ | No | NA |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ✓ | No | NA |
| 6. Sample(s) in proper container(s)? | Yes ✓ | No | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ✓ | No | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ✓ | No | |
| 9. Was preservative added to bottles? | Yes | No ✓ | NA |
| 10. VOA vials have zero headspace? | Yes ✓ | No | No VOA Vials |
| 11. Were any sample containers received broken? | Yes | No ✓ | |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes ✓ | No | # of preserved bottles checked for pH: 36
(<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ✓ | No | Adjusted? 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 | 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: PWT - DUP04 is correct sample ID 11/04/16

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present			

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
8/16/08	0900	WATER	MKTF-21	40 ML VOA-5	HCL	-001
				1 L AMBER-1	NEAT	
				250 ML AMBER-1	NEAT	
				500 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	H ₂ SO ₄	
				500 ML PLASTIC-1	NEAT	
				40 ML VOA-5	HCL	-002
				1 L AMBER-2	NEAT	
				250 ML AMBER-2	NEAT	
				500 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	HNO ₃	
				40 ML VOA-5	HCL	-003
				1 L AMBER-2	NEAT	
				250 ML AMBER-2	NEAT	
				500 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	HNO ₃	

Remarks:

Received by:	Date	Time

Received by: _____ Date _____ Time _____

Received by: <i>Kimberly Conecha</i>	Date	Time

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

Turn-Around Time:

☒ Standard	☐ Rush
Project Name: 2016 4TH QTR (MKTF)	
Project #:	
Project Manager: CHERYL JOHNSON	
Sampler: TRACY PAYNE	
On Ice:	☒ Yes ☐ No
Sample Temperature: 1.3	

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Tel. 505-345-3975

Analysis Request

[illegible]

Project Manager:	
	CHERYL JOHNSON
Sampler:	TRACY PAYNE
On Ice:	☒ Yes ☐ No
Sample Temperature:	1.3

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
5/16	0900	WATER	MKTF-20	125 mL PLASTIC-1	H ₂ SO ₄	1611209
			↓	500 mL PLASTIC-1	NEAT	-002
	0935		FB110316	40 mL VOA-5	HCL	-003
				1 L AMBER-1	NEAT	
				250 mL AMBER-1	NEAT	
				500 mL PLASTIC-1	HNO ₃	
				125 mL PLASTIC-1	HNO ₃	
				125 mL PLASTIC-1	H ₂ SO ₄	
				500 mL PLASTIC-1	NEAT	
				40 mL VOA-5	HCL	-004
	1010		MKTF-16	1 L AMBER-1	NEAT	
				250 mL AMBER-1	NEAT	

Remarks:

Date _____ Time _____

Received by: ALPENA ✓

Relinquished by:

Time:	
Date:	

Date _____ Time _____

Received by: _____

Belmarished by:

Date:	Time:
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Enoch 11/3/66 1655

Continued on p. 10

9/3/16 1655

Any sub-contracted data will be clearly notated on the analytical report. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

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

Turn-Around Time:

☒ Standard ☐ Rush
 Project Name: **2016 4TH QTR (MKTF)**
 Project #: **505-345-3975**
 Project Manager: **CHERYL L. JOHNSON**
 Sampler: **TRACY PAYNE**
 On Ice: ☒ Yes ☐ No
 Sample Temperature: **1.3**



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

Analysis Request											
BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	MAJOR CATIONS / ANIONS
											WGC METALS
											(TOTAL & DISSOLVED)
											Air Bubbles (Y or N)

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
4/16	16020	WATER	MKTF-10	500 ML PLASTIC-1	HNO ₃	1611209
				125 ML PLASTIC-1	HNO ₃	-009
				125 ML PLASTIC-1	H ₂ SO ₄	
				500 ML PLASTIC-1	NEAT	
				40 ML VOA-5	HCL	-010
				1 L AMBER-1	NEAT	
				250 ML AMBER-1	NEAT	
				500 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	H ₂ SO ₄	
				500 ML PLASTIC-1	NEAT	
				40 ML VOA-5	HCL	
				1 L AMBER-1	NEAT	
				250 ML AMBER-1	NEAT	
				500 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	HNO ₃	
				125 ML PLASTIC-1	H ₂ SO ₄	
				500 ML PLASTIC-1	NEAT	

Relinquished by: **TRACY PAYNE** Date: **4/16** Time: **1945**
 Relinquished by: **Tracy Payne** Date: **4/16** Time: **1655**
 Received by: **Tracy Payne** Date: **4/16** Time: **1655**
 Received by: **Tracy Payne** Date: **4/16** Time: **1655**

Turn-Around Time:

ent:

ent: WESTERN REFINING SW, INC.

GALLUP REFINERY

Mailing Address: 92 GTANT CROSSING R

GALLUP NM 87301

Phone #: 505-722-0231

mail or Fax#: CHERYL L. JOHNSON @
WNR.COM

VQC Package:

	Standard	X Level 4 (Full Validation)
1.	Identify the problem or opportunity for improvement.	
2.	Analyze the current process and identify areas for improvement.	
3.	Develop a plan for improvement.	
4.	Implement the plan.	
5.	Evaluate the results of the improvement effort.	
6.	Sustain the improvements.	
7.	Communicate the results of the improvement effort.	
8.	Document the improvement effort.	
9.	Share the results of the improvement effort with others.	
10.	Reflect on the improvement effort and learn from it.	

```

;creditation

```

☐ Other

EDD (Type) EXCEL

ate

Matrix

Sample Request ID

1

1

3

1

—

1/2

1. 1.1

1/40 TRIP BLANK

ate:

Relinquished by:

Received by:

Date / Time

ate:

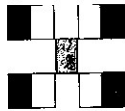
Relinquished by:

Received by:

Date _____ Time _____

Indien (oneha u/3/16/655

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



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks:

Date	Time
------	------

Received by:

	Delineated by:
--	----------------

11



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.: 1611263

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/4/2016 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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 3:35:00 PM

Lab ID: 1611263-001

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 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 8:28:51 PM	28587
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	11/9/2016 1:51:11 PM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 1:51:11 PM	28543
Surr: DNOP	108	0	77.1-144		%Rec	1	11/9/2016 1:51:11 PM	28543
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	1.7	0.25	0.50		mg/L	10	11/10/2016 3:27:45 PM	G38599
Surr: BFB	89.9	0	66.4-120		%Rec	10	11/10/2016 3:27:45 PM	G38599
EPA METHOD 300.0: ANIONS								
							Analyst: MRA	
Fluoride	0.82	0.050	0.10		mg/L	1	11/8/2016 10:29:47 AM	R38549
Chloride	54	1.0	10		mg/L	20	11/8/2016 11:07:00 AM	R38549
Bromide	0.28	0.044	0.10		mg/L	1	11/8/2016 10:29:47 AM	R38549
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 10:29:47 AM	R38549
Sulfate	310	2.8	10		mg/L	20	11/8/2016 11:07:00 AM	R38549
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/8/2016 8:02:44 PM	R38550
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.23	0.0013	0.0020		mg/L	1	11/28/2016 3:26:00 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 3:26:00 PM	B38985
Calcium	130	2.5	5.0		mg/L	5	11/28/2016 3:34:52 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 3:26:00 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 3:26:00 PM	B38985
Iron	3.0	0.10	0.10	*	mg/L	5	11/28/2016 3:34:52 PM	B38985
Magnesium	37	0.50	1.0		mg/L	1	11/28/2016 3:26:00 PM	B38985
Manganese	2.9	0.0016	0.010	*	mg/L	5	11/28/2016 3:34:52 PM	B38985
Potassium	ND	0.50	1.0		mg/L	1	11/28/2016 3:26:00 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 3:26:00 PM	B38985
Sodium	130	2.5	5.0		mg/L	5	11/28/2016 3:34:52 PM	B38985
Zinc	ND	0.0028	0.010		mg/L	1	11/28/2016 3:26:00 PM	B38985
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	1.2	0.0079	0.020		mg/L	10	11/28/2016 10:49:56 AM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 11:58:46 AM	28751
Chromium	0.011	0.0027	0.0060		mg/L	1	11/21/2016 11:58:46 AM	28751
Copper	0.012	0.0030	0.0060		mg/L	1	11/21/2016 11:58:46 AM	28751
Iron	22	1.0	1.0	*	mg/L	50	11/28/2016 10:51:46 AM	28751
Manganese	5.5	0.0027	0.020	*	mg/L	10	11/28/2016 10:49:56 AM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 11:58:46 AM	28751
Zinc	0.039	0.0027	0.010		mg/L	1	11/28/2016 10:48:07 AM	28751

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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 3:35:00 PM

Lab ID: 1611263-001

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.00081	0.00014	0.0010	J	mg/L	1	11/18/2016 7:57:23 PM	B38851
Lead	0.00032	0.00017	0.00050	J	mg/L	1	11/18/2016 7:57:23 PM	B38851
Selenium	0.0014	0.0011	0.0050	J	mg/L	5	11/22/2016 3:23:11 PM	C38934
Uranium	0.00075	0.000051	0.00050		mg/L	1	11/18/2016 7:57:23 PM	B38851
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0035	0.00021	0.0010		mg/L	1	11/21/2016 5:55:26 PM	28751
Lead	0.019	0.000081	0.00050	*	mg/L	1	11/21/2016 5:55:26 PM	28751
Selenium	0.0024	0.00094	0.0050	J	mg/L	5	11/21/2016 5:58:27 PM	28751
Uranium	0.0039	0.00017	0.00050		mg/L	1	11/18/2016 4:15:10 PM	28751
EPA METHOD 245.1: MERCURY							Analyst: JLF	
Mercury	0.00011	0.000053	0.00020	J	mg/L	1	11/18/2016 5:34:53 PM	28761
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Acenaphthylene	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Aniline	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Anthracene	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Azobenzene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Benz(a)anthracene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Benzo(a)pyrene	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Benzo(b)fluoranthene	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Benzo(g,h,i)perylene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Benzo(k)fluoranthene	ND	15	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Benzoic acid	55	13	100	JD	µg/L	1	11/15/2016 5:35:22 PM	28584
Benzyl alcohol	ND	15	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Bis(2-chloroethoxy)methane	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Bis(2-chloroethyl)ether	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Bis(2-chloroisopropyl)ether	ND	9.5	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Bis(2-ethylhexyl)phthalate	34	13	50	JD	µg/L	1	11/15/2016 5:35:22 PM	28584
4-Bromophenyl phenyl ether	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Butyl benzyl phthalate	14	12	50	JD	µg/L	1	11/15/2016 5:35:22 PM	28584
Carbazole	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
4-Chloro-3-methylphenol	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
4-Chloroaniline	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2-Chloronaphthalene	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2-Chlorophenol	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
4-Chlorophenyl phenyl ether	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Chrysene	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Di-n-butyl phthalate	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584

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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 3:35:00 PM

Lab ID: 1611263-001

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Di-n-octyl phthalate	34	9.9	50	JD	µg/L	1	11/15/2016 5:35:22 PM	28584
Dibenz(a,h)anthracene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Dibenzofuran	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
1,2-Dichlorobenzene	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
1,3-Dichlorobenzene	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
1,4-Dichlorobenzene	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
3,3'-Dichlorobenzidine	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Diethyl phthalate	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Dimethyl phthalate	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2,4-Dichlorophenol	ND	12	100	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2,4-Dimethylphenol	ND	15	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
4,6-Dinitro-2-methylphenol	ND	9.0	100	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2,4-Dinitrophenol	ND	14	100	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2,4-Dinitrotoluene	ND	16	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2,6-Dinitrotoluene	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Fluoranthene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Fluorene	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Hexachlorobenzene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Hexachlorobutadiene	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Hexachlorocyclopentadiene	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Hexachloroethane	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Indeno(1,2,3-cd)pyrene	ND	15	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Isophorone	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
1-Methylnaphthalene	ND	15	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2-Methylnaphthalene	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2-Methylphenol	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
3+4-Methylphenol	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
N-Nitrosodi-n-propylamine	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
N-Nitrosodimethylamine	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
N-Nitrosodiphenylamine	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Naphthalene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2-Nitroaniline	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
3-Nitroaniline	ND	15	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
4-Nitroaniline	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Nitrobenzene	ND	14	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2-Nitrophenol	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
4-Nitrophenol	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Pentachlorophenol	ND	12	100	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Phenanthrene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584

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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 3:35:00 PM

Lab ID: 1611263-001

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	ND	9.9	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Pyrene	ND	15	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Pyridine	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
1,2,4-Trichlorobenzene	ND	13	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2,4,5-Trichlorophenol	ND	11	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
2,4,6-Trichlorophenol	ND	12	50	D	µg/L	1	11/15/2016 5:35:22 PM	28584
Surr: 2-Fluorophenol	24.6	0	15-98.1	D	%Rec	1	11/15/2016 5:35:22 PM	28584
Surr: Phenol-d5	18.4	0	15-80.7	D	%Rec	1	11/15/2016 5:35:22 PM	28584
Surr: 2,4,6-Tribromophenol	45.1	0	15-112	D	%Rec	1	11/15/2016 5:35:22 PM	28584
Surr: Nitrobenzene-d5	70.9	0	27.2-90.7	D	%Rec	1	11/15/2016 5:35:22 PM	28584
Surr: 2-Fluorobiphenyl	56.9	0	23.3-85.6	D	%Rec	1	11/15/2016 5:35:22 PM	28584
Surr: 4-Terphenyl-d14	30.5	0	27.6-107	D	%Rec	1	11/15/2016 5:35:22 PM	28584
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	65	0.096	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Toluene	0.26	0.12	1.0	J	µg/L	1	11/11/2016 11:43:42 AM	R38668
Ethylbenzene	55	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Methyl tert-butyl ether (MTBE)	10	0.21	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2,4-Trimethylbenzene	18	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,3,5-Trimethylbenzene	0.32	0.12	1.0	J	µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2-Dichloroethane (EDC)	ND	0.12	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Naphthalene	2.8	0.093	2.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1-Methylnaphthalene	1.6	0.20	4.0	J	µg/L	1	11/11/2016 11:43:42 AM	R38668
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Acetone	ND	4.9	10		µg/L	1	11/11/2016 11:43:42 AM	R38668
Bromobenzene	ND	0.098	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Bromodichloromethane	ND	0.14	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Bromoform	ND	0.10	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Bromomethane	ND	0.78	3.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
2-Butanone	ND	0.74	10		µg/L	1	11/11/2016 11:43:42 AM	R38668
Carbon disulfide	ND	0.60	10		µg/L	1	11/11/2016 11:43:42 AM	R38668
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Chlorobenzene	1.2	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Chloroethane	ND	0.19	2.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Chloroform	ND	0.089	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Chloromethane	ND	0.21	3.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668

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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 3:35:00 PM

Lab ID: 1611263-001

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 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	11/11/2016 11:43:42 AM	R38668
1,2-Dibromo-3-chloropropane	ND	0.23	2.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Dibromochloromethane	ND	0.087	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Dibromomethane	ND	0.12	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,4-Dichlorobenzene	2.8	0.14	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Dichlorodifluoromethane	ND	0.36	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,1-Dichloroethene	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2-Dichloropropane	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
2,2-Dichloropropane	ND	0.17	2.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
2-Hexanone	ND	0.84	10		µg/L	1	11/11/2016 11:43:42 AM	R38668
Isopropylbenzene	3.9	0.10	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
4-Isopropyltoluene	0.49	0.14	1.0	J	µg/L	1	11/11/2016 11:43:42 AM	R38668
4-Methyl-2-pentanone	ND	0.43	10		µg/L	1	11/11/2016 11:43:42 AM	R38668
Methylene Chloride	ND	0.19	3.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
n-Butylbenzene	0.45	0.16	3.0	J	µg/L	1	11/11/2016 11:43:42 AM	R38668
n-Propylbenzene	11	0.13	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
sec-Butylbenzene	2.1	0.12	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Styrene	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
tert-Butylbenzene	0.25	0.12	1.0	J	µg/L	1	11/11/2016 11:43:42 AM	R38668
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,1,2,2-Tetrachloroethane	ND	0.13	2.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
trans-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,1,1-Trichloroethane	ND	0.091	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,1,2-Trichloroethane	ND	0.13	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Trichlorofluoromethane	ND	0.20	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
1,2,3-Trichloropropane	ND	0.20	2.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Vinyl chloride	ND	0.20	1.0		µg/L	1	11/11/2016 11:43:42 AM	R38668
Xylenes, Total	10	0.37	1.5		µg/L	1	11/11/2016 11:43:42 AM	R38668

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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 3:35:00 PM

Lab ID: 1611263-001

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	83.6	0	70-130		%Rec	1	11/11/2016 11:43:42 AM	R38668
Surr: 4-Bromofluorobenzene	88.3	0	70-130		%Rec	1	11/11/2016 11:43:42 AM	R38668
Surr: Dibromofluoromethane	79.8	0	70-130		%Rec	1	11/11/2016 11:43:42 AM	R38668
Surr: Toluene-d8	103	0	70-130		%Rec	1	11/11/2016 11:43:42 AM	R38668

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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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 4:45:00 PM

Lab ID: 1611263-002

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB								
							Analyst: JME	
1,2-Dibromoethane	0.33	0.033	0.10		µg/L	10	11/11/2016 9:21:24 AM	28587
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: TOM	
Diesel Range Organics (DRO)	9.3	0.69	1.0		mg/L	1	11/9/2016 2:12:44 PM	28543
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/9/2016 2:12:44 PM	28543
Surr: DNOP	105	0	77.1-144		%Rec	1	11/9/2016 2:12:44 PM	28543
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	13	0.51	1.0		mg/L	20	11/10/2016 4:41:26 PM	G38599
Surr: BFB	120	0	66.4-120	S	%Rec	20	11/10/2016 4:41:26 PM	G38599
EPA METHOD 300.0: ANIONS								
							Analyst: MRA	
Fluoride	0.46	0.050	0.10		mg/L	1	11/8/2016 11:19:25 AM	R38549
Chloride	120	1.0	10		mg/L	20	11/8/2016 11:31:49 AM	R38549
Bromide	0.60	0.044	0.10		mg/L	1	11/8/2016 11:19:25 AM	R38549
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/8/2016 11:19:25 AM	R38549
Sulfate	56	2.8	10		mg/L	20	11/8/2016 11:31:49 AM	R38549
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/8/2016 8:52:23 PM	R38550
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.58	0.0013	0.0020		mg/L	1	11/28/2016 3:36:58 PM	B38985
Cadmium	ND	0.00075	0.0020		mg/L	1	11/28/2016 3:36:58 PM	B38985
Calcium	29	0.50	1.0		mg/L	1	11/28/2016 3:36:58 PM	B38985
Chromium	ND	0.0018	0.0060		mg/L	1	11/28/2016 3:36:58 PM	B38985
Copper	ND	0.0040	0.0060		mg/L	1	11/28/2016 3:36:58 PM	B38985
Iron	0.25	0.020	0.020		mg/L	1	11/28/2016 3:36:58 PM	B38985
Magnesium	6.4	0.50	1.0		mg/L	1	11/28/2016 3:36:58 PM	B38985
Manganese	0.46	0.00032	0.0020	*	mg/L	1	11/28/2016 3:36:58 PM	B38985
Potassium	1.7	0.50	1.0		mg/L	1	11/28/2016 3:36:58 PM	B38985
Silver	ND	0.0028	0.0050		mg/L	1	11/28/2016 3:36:58 PM	B38985
Sodium	200	2.5	5.0		mg/L	5	11/28/2016 3:39:02 PM	B38985
Zinc	ND	0.0028	0.010		mg/L	1	11/28/2016 3:36:58 PM	B38985
EPA METHOD 200.7: TOTAL METALS								
							Analyst: MED	
Barium	0.69	0.00079	0.0020		mg/L	1	11/21/2016 12:00:34 PM	28751
Cadmium	ND	0.0015	0.0020		mg/L	1	11/21/2016 12:00:34 PM	28751
Chromium	ND	0.0027	0.0060		mg/L	1	11/21/2016 12:00:34 PM	28751
Copper	0.0050	0.0030	0.0060	J	mg/L	1	11/21/2016 12:00:34 PM	28751
Iron	2.2	0.10	0.10	*	mg/L	5	11/28/2016 10:55:24 AM	28751
Manganese	0.55	0.00027	0.0020	*	mg/L	1	11/21/2016 12:00:34 PM	28751
Silver	ND	0.0015	0.0050		mg/L	1	11/21/2016 12:00:34 PM	28751
Zinc	0.015	0.0027	0.010		mg/L	1	11/28/2016 10:53:43 AM	28751

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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 4:45:00 PM

Lab ID: 1611263-002

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Arsenic	0.0035	0.00014	0.0010		mg/L	1	11/18/2016 8:00:26 PM	B38851
Lead	0.00025	0.00017	0.00050	J	mg/L	1	11/18/2016 8:00:26 PM	B38851
Selenium	0.0030	0.00021	0.0010		mg/L	1	11/18/2016 8:00:26 PM	B38851
Uranium	0.036	0.00026	0.0025	*	mg/L	5	11/22/2016 3:26:15 PM	C38934
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0034	0.00021	0.0010		mg/L	1	11/21/2016 6:01:27 PM	28751
Lead	0.0046	0.000081	0.00050		mg/L	1	11/18/2016 4:18:10 PM	28751
Selenium	0.0036	0.00094	0.0050	J	mg/L	5	11/21/2016 6:04:27 PM	28751
Uranium	0.025	0.00087	0.0025		mg/L	5	11/21/2016 6:04:27 PM	28751
EPA METHOD 245.1: MERCURY							Analyst: JLF	
Mercury	0.000081	0.000053	0.00020	J	mg/L	1	11/18/2016 5:36:44 PM	28761
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Acenaphthylene	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Aniline	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Anthracene	ND	2.5	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Azobenzene	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Benzoic acid	19	2.6	20	J	µg/L	1	11/9/2016 8:43:57 PM	28498
Benzyl alcohol	ND	3.0	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Bis(2-ethylhexyl)phthalate	8.4	2.6	10	J	µg/L	1	11/9/2016 8:43:57 PM	28498
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Carbazole	ND	2.3	10		µg/L	1	11/9/2016 8:43:57 PM	28498
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
4-Chloroaniline	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2-Chlorophenol	ND	2.2	10		µg/L	1	11/9/2016 8:43:57 PM	28498
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Chrysene	ND	2.8	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498

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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 4:45:00 PM

Lab ID: 1611263-002

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

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	11/9/2016 8:43:57 PM	28498
Dibenz(a,h)anthracene	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Dibenzofuran	ND	2.5	10		µg/L	1	11/9/2016 8:43:57 PM	28498
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 8:43:57 PM	28498
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/9/2016 8:43:57 PM	28498
1,4-Dichlorobenzene	3.2	2.4	10	J	µg/L	1	11/9/2016 8:43:57 PM	28498
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Diethyl phthalate	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/9/2016 8:43:57 PM	28498
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/9/2016 8:43:57 PM	28498
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/9/2016 8:43:57 PM	28498
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/9/2016 8:43:57 PM	28498
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Fluoranthene	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Fluorene	ND	2.7	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Hexachloroethane	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Isophorone	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
1-Methylnaphthalene	51	2.9	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2-Methylnaphthalene	64	2.9	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2-Methylphenol	12	2.5	10		µg/L	1	11/9/2016 8:43:57 PM	28498
3+4-Methylphenol	3.5	2.3	10	J	µg/L	1	11/9/2016 8:43:57 PM	28498
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/9/2016 8:43:57 PM	28498
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Naphthalene	200	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2-Nitroaniline	ND	2.8	10		µg/L	1	11/9/2016 8:43:57 PM	28498
3-Nitroaniline	ND	2.9	10		µg/L	1	11/9/2016 8:43:57 PM	28498
4-Nitroaniline	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Nitrobenzene	ND	2.8	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2-Nitrophenol	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
4-Nitrophenol	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Pentachlorophenol	ND	2.3	20		µg/L	1	11/9/2016 8:43:57 PM	28498
Phenanthrene	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 4:45:00 PM

Lab ID: 1611263-002

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Phenol	7.4	2.0	10	J	µg/L	1	11/9/2016 8:43:57 PM	28498
Pyrene	ND	3.1	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Pyridine	ND	2.2	10		µg/L	1	11/9/2016 8:43:57 PM	28498
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/9/2016 8:43:57 PM	28498
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/9/2016 8:43:57 PM	28498
Surr: 2-Fluorophenol	20.8	0	15-98.1		%Rec	1	11/9/2016 8:43:57 PM	28498
Surr: Phenol-d5	18.5	0	15-80.7		%Rec	1	11/9/2016 8:43:57 PM	28498
Surr: 2,4,6-Tribromophenol	36.3	0	15-112		%Rec	1	11/9/2016 8:43:57 PM	28498
Surr: Nitrobenzene-d5	52.6	0	27.2-90.7		%Rec	1	11/9/2016 8:43:57 PM	28498
Surr: 2-Fluorobiphenyl	48.0	0	23.3-85.6		%Rec	1	11/9/2016 8:43:57 PM	28498
Surr: 4-Terphenyl-d14	37.6	0	27.6-107		%Rec	1	11/9/2016 8:43:57 PM	28498
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	960	0.96	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Toluene	12	1.2	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Ethylbenzene	14	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Methyl tert-butyl ether (MTBE)	30	2.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2,4-Trimethylbenzene	470	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,3,5-Trimethylbenzene	70	1.2	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2-Dichloroethane (EDC)	9.3	1.2	10	J	µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2-Dibromoethane (EDB)	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Naphthalene	380	0.93	20		µg/L	10	11/11/2016 12:41:18 PM	R38668
1-Methylnaphthalene	66	2.0	40		µg/L	10	11/11/2016 12:41:18 PM	R38668
2-Methylnaphthalene	81	1.6	40		µg/L	10	11/11/2016 12:41:18 PM	R38668
Acetone	ND	49	100		µg/L	10	11/11/2016 12:41:18 PM	R38668
Bromobenzene	ND	0.98	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Bromodichloromethane	ND	1.4	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Bromoform	ND	1.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Bromomethane	ND	7.8	30		µg/L	10	11/11/2016 12:41:18 PM	R38668
2-Butanone	35	7.4	100	J	µg/L	10	11/11/2016 12:41:18 PM	R38668
Carbon disulfide	ND	6.0	100		µg/L	10	11/11/2016 12:41:18 PM	R38668
Carbon Tetrachloride	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Chlorobenzene	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Chloroethane	ND	1.9	20		µg/L	10	11/11/2016 12:41:18 PM	R38668
Chloroform	ND	0.89	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Chloromethane	ND	2.1	30		µg/L	10	11/11/2016 12:41:18 PM	R38668
2-Chlorotoluene	ND	4.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
4-Chlorotoluene	ND	1.3	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
cis-1,2-DCE	ND	1.2	10		µg/L	10	11/11/2016 12:41:18 PM	R38668

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 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 4:45:00 PM

Lab ID: 1611263-002

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
cis-1,3-Dichloropropene	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2-Dibromo-3-chloropropane	ND	2.3	20		µg/L	10	11/11/2016 12:41:18 PM	R38668
Dibromochloromethane	ND	0.87	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Dibromomethane	ND	1.2	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2-Dichlorobenzene	ND	4.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,3-Dichlorobenzene	ND	1.4	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,4-Dichlorobenzene	7.1	1.4	10	J	µg/L	10	11/11/2016 12:41:18 PM	R38668
Dichlorodifluoromethane	ND	3.6	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,1-Dichloroethane	26	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,1-Dichloroethene	110	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2-Dichloropropane	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,3-Dichloropropane	ND	1.6	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
2,2-Dichloropropane	ND	1.7	20		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,1-Dichloropropene	ND	1.3	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Hexachlorobutadiene	ND	2.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
2-Hexanone	ND	8.4	100		µg/L	10	11/11/2016 12:41:18 PM	R38668
Isopropylbenzene	73	1.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
4-Isopropyltoluene	5.5	1.4	10	J	µg/L	10	11/11/2016 12:41:18 PM	R38668
4-Methyl-2-pentanone	ND	4.3	100		µg/L	10	11/11/2016 12:41:18 PM	R38668
Methylene Chloride	ND	1.9	30		µg/L	10	11/11/2016 12:41:18 PM	R38668
n-Butylbenzene	27	1.6	30	J	µg/L	10	11/11/2016 12:41:18 PM	R38668
n-Propylbenzene	78	1.3	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
sec-Butylbenzene	11	1.2	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Styrene	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
tert-Butylbenzene	ND	1.2	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,1,1,2-Tetrachloroethane	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,1,2,2-Tetrachloroethane	ND	1.3	20		µg/L	10	11/11/2016 12:41:18 PM	R38668
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
trans-1,2-DCE	ND	4.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
trans-1,3-Dichloropropene	ND	1.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2,3-Trichlorobenzene	ND	1.1	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2,4-Trichlorobenzene	ND	1.3	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,1,1-Trichloroethane	8.1	0.91	10	J	µg/L	10	11/11/2016 12:41:18 PM	R38668
1,1,2-Trichloroethane	ND	1.3	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Trichloroethene (TCE)	200	1.8	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Trichlorofluoromethane	ND	2.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
1,2,3-Trichloropropane	ND	2.0	20		µg/L	10	11/11/2016 12:41:18 PM	R38668
Vinyl chloride	ND	2.0	10		µg/L	10	11/11/2016 12:41:18 PM	R38668
Xylenes, Total	840	3.7	15		µg/L	10	11/11/2016 12:41:18 PM	R38668

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611263

Date Reported: 12/13/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: 2016 4th QTR MKTF

Collection Date: 11/3/2016 4:45:00 PM

Lab ID: 1611263-002

Matrix: AQUEOUS

Received Date: 11/4/2016 2:05:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 1,2-Dichloroethane-d4	87.3	0	70-130		%Rec	10	11/11/2016 12:41:18 PM	R38668
Surr: 4-Bromofluorobenzene	86.1	0	70-130		%Rec	10	11/11/2016 12:41:18 PM	R38668
Surr: Dibromofluoromethane	84.9	0	70-130		%Rec	10	11/11/2016 12:41:18 PM	R38668
Surr: Toluene-d8	102	0	70-130		%Rec	10	11/11/2016 12:41:18 PM	R38668

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

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

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611263

13-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: B38985			RunNo: 38985					
Prep Date:		Analysis Date: 11/28/2016			SeqNo: 1219566		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS-B		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: B38985		RunNo: 38985					
Prep Date:	Analysis Date: 11/28/2016				SeqNo: 1219567		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.1	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.4	85	115			
Calcium	48	1.0	50.00	0	95.2	85	115			
Chromium	0.47	0.0060	0.5000	0	93.9	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.46	0.020	0.5000	0	91.1	85	115			
Magnesium	49	1.0	50.00	0	98.1	85	115			
Manganese	0.46	0.0020	0.5000	0	92.3	85	115			
Potassium	50	1.0	50.00	0	99.6	85	115			
Silver	0.099	0.0050	0.1000	0	99.4	85	115			
Sodium	49	1.0	50.00	0	98.6	85	115			
Zinc	0.46	0.010	0.5000	0	92.8	85	115			

Sample ID	LLCS-B		SampType: LCSLL		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: B38985		RunNo: 38985					
Prep Date:			Analysis Date: 11/28/2016		SeqNo: 1219568		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	94.0	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	103	50	150			
Calcium	0.47	1.0	0.5000	0	93.7	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.8	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#: 1611263

13-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: B38985			RunNo: 38985				
Prep Date:			Analysis Date: 11/28/2016			SeqNo: 1219568		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0074	0.0060	0.006000	0	124	50	150			
Iron	0.019	0.020	0.02000	0	96.6	50	150			J
Magnesium	0.50	1.0	0.5000	0	99.5	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.61	1.0	0.5000	0	123	50	150			J
Silver	0.0049	0.0050	0.005000	0	98.8	50	150			J
Sodium	0.49	1.0	0.5000	0	97.6	50	150			J
Zinc	0.0052	0.010	0.005000	0	104	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	MB-28751		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 28751		RunNo: 38846					
Prep Date:	11/18/2016		Analysis Date: 11/19/2016		SeqNo: 1214021		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-28751		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 28751		RunNo: 38846					
Prep Date:	11/18/2016		Analysis Date: 11/19/2016		SeqNo: 1214022		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.5	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.2	85	115			
Chromium	0.47	0.0060	0.5000	0	94.4	85	115			
Copper	0.47	0.0060	0.5000	0	94.5	85	115			
Iron	0.47	0.020	0.5000	0	94.2	85	115			
Manganese	0.47	0.0020	0.5000	0	93.1	85	115			
Silver	0.098	0.0050	0.1000	0	97.6	85	115			
Zinc	0.46	0.010	0.5000	0	93.0	85	115			

Sample ID	LLLCS-28751		SampType: LCSLL		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 28751		RunNo: 38846					
Prep Date:	11/18/2016		Analysis Date: 11/19/2016		SeqNo: 1214023		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	103	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.8	50	150			J
Copper	0.0054	0.0060	0.006000	0	90.0	50	150			J
Iron	0.023	0.020	0.02000	0	117	50	150			
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Zinc	0.0055	0.010	0.005000	0	111	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#: 1611263

13-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: B38851			RunNo: 38851						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1214206		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.8	85	115			
Lead	0.012	0.00050	0.01250	0	92.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.012	0.00050	0.01250	0	93.0	85	115			

Sample ID LLCS	SampType: LCSLL			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: B38851			RunNo: 38851						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1214208		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.7	50	150			J
Selenium	0.00098	0.0010	0.001000	0	97.5	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID: PBW	Batch ID: B38851			RunNo: 38851						
Prep Date:	Analysis Date: 11/18/2016			SeqNo: 1214210		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 1611375-002MSLL	SampType: MS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: BatchQC	Batch ID: C38934			RunNo: 38934						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217191		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.11	0.0025	0.06250	0.04376	112	70	130			

Sample ID LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals						
Client ID: LCSW	Batch ID: C38934			RunNo: 38934						
Prep Date:	Analysis Date: 11/22/2016			SeqNo: 1217205		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.012	0.00050	0.01250	0	99.3	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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	LLLCS		SampType: LCSLL		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: C38934		RunNo: 38934					
Prep Date:			Analysis Date: 11/22/2016		SeqNo: 1217208		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0010	0.0010	0.001000	0	99.5	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.5	50	150			J

Sample ID	MB		SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW		Batch ID: C38934		RunNo: 38934					
Prep Date:			Analysis Date: 11/22/2016		SeqNo: 1217211		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	MB-28751		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	28751		RunNo:	38823			
Prep Date:	11/18/2016		Analysis Date:	11/18/2016		SeqNo:	1213065	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-28751		SampType:	LCS		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	LCSW		Batch ID:	28751		RunNo:	38823			
Prep Date:	11/18/2016		Analysis Date:	11/18/2016		SeqNo:	1213066	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	98.0	85	115			
Lead	0.012	0.00050	0.01250	0	99.0	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.012	0.00050	0.01250	0	98.0	85	115			

Sample ID	MSLLLCS-28751		SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	BatchQC		Batch ID:	28751		RunNo:	38823			
Prep Date:	11/18/2016		Analysis Date:	11/18/2016		SeqNo:	1213067	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	95.7	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Selenium	0.00093	0.0010	0.001000	0	93.4	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.6	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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	MB-28761		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 28761		RunNo: 38840					
Prep Date:	11/18/2016		Analysis Date: 11/18/2016		SeqNo: 1213746		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-28761			SampType:	LCS		TestCode:	EPA Method 245.1: Mercury			
Client ID:	LCSW			Batch ID:	28761		RunNo:	38840			
Prep Date:	11/18/2016			Analysis Date:	11/18/2016		SeqNo:	1213747		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0048	0.00020	0.005000	0	96.0	80	120				

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611263

13-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: R38549		RunNo: 38549							
Prep Date:	Analysis Date: 11/8/2016		SeqNo: 1204344		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSW	Batch ID: R38549		RunNo: 38549							
Prep Date:	Analysis Date: 11/8/2016		SeqNo: 1204345		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.7	90	110			
Chloride	4.7	0.50	5.000	0	93.7	90	110			
Bromide	2.4	0.10	2.500	0	96.2	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.3	90	110			
Sulfate	9.7	0.50	10.00	0	97.4	90	110			

Sample ID 1611263-001EMS	SampType: ms		TestCode: EPA Method 300.0: Anions							
Client ID: MKTF-35	Batch ID: R38549		RunNo: 38549							
Prep Date:	Analysis Date: 11/8/2016		SeqNo: 1204347		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.3	0.10	0.5000	0.8180	91.3	74.5	121			
Bromide	2.6	0.10	2.500	0.2796	93.8	74.6	115			

Sample ID 1611263-001EMSD	SampType: msd		TestCode: EPA Method 300.0: Anions							
Client ID: MKTF-35	Batch ID: R38549		RunNo: 38549							
Prep Date:	Analysis Date: 11/8/2016		SeqNo: 1204348		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.3	0.10	0.5000	0.8180	96.1	74.5	121	1.85	20	
Bromide	2.7	0.10	2.500	0.2796	97.2	74.6	115	3.17	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
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

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
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.4	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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	MB-28587		SampType:	MBLK		TestCode:	EPA Method 8011/504.1: EDB			
Client ID:	PBW		Batch ID:	28587		RunNo:	38602			
Prep Date:	11/10/2016		Analysis Date:	11/10/2016		SeqNo:	1205730	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-28587		SampType:	LCS		TestCode:	EPA Method 8011/504.1: EDB			
Client ID:	LCSW		Batch ID:	28587		RunNo:	38602			
Prep Date:	11/10/2016		Analysis Date:	11/10/2016		SeqNo:	1205733	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	97.4	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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	LCS-28543		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	LCSW		Batch ID: 28543		RunNo: 38562					
Prep Date:	11/8/2016		Analysis Date: 11/9/2016		SeqNo: 1204865		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	94.0	63.2	155			
Surr: DNOP	0.52		0.5000		104	77.1	144			

Sample ID	MB-28543	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range					
Client ID:	PBW	Batch ID: 28543			RunNo: 38562					
Prep Date:	11/8/2016	Analysis Date: 11/9/2016			SeqNo: 1204866		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		101	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#: 1611263

13-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: G38599		RunNo: 38599							
Prep Date:	Analysis Date: 11/10/2016		SeqNo: 1206149		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		89.5	66.4	120			

Sample ID 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSW	Batch ID: G38599		RunNo: 38599							
Prep Date:	Analysis Date: 11/10/2016		SeqNo: 1206150		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	92.4	80	120			
Surr: BFB	19		20.00		94.8	66.4	120			

Sample ID 1611263-001AMS	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: MKTF-35	Batch ID: G38599		RunNo: 38599							
Prep Date:	Analysis Date: 11/10/2016		SeqNo: 1206198		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	7.0	0.50	5.000	1.746	105	64.8	129			
Surr: BFB	200		200.0		101	66.4	120			

Sample ID 1611263-001AMSD	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: MKTF-35	Batch ID: G38599		RunNo: 38599							
Prep Date:	Analysis Date: 11/10/2016		SeqNo: 1206199		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	6.7	0.50	5.000	1.746	98.8	64.8	129	4.30	20	
Surr: BFB	200		200.0		97.5	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#: 1611263

13-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: R38668		RunNo: 38668				
Prep Date:	Analysis Date: 11/11/2016			SeqNo: 1207640		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R38668			RunNo: 38668					
Prep Date:		Analysis Date: 11/11/2016			SeqNo: 1207642		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611263

13-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:	R38668	RunNo:	38668					
Prep Date:		Analysis Date:	11/11/2016	SeqNo:	1207642	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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	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#: 1611263

13-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: R38668		RunNo: 38668							
Prep Date:	Analysis Date: 11/11/2016		SeqNo: 1207642		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	9.7		10.00		97.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID 1611263-002ams	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: MKTF-37	Batch ID: R38668		RunNo: 38668							
Prep Date:	Analysis Date: 11/11/2016		SeqNo: 1207648		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1100	10	200.0	958.3	88.3	70	130			E
Toluene	210	10	200.0	11.86	99.9	70	130			
Chlorobenzene	190	10	200.0	0	94.8	70	130			
1,1-Dichloroethene	290	10	200.0	109.8	88.3	70	130			
Trichloroethene (TCE)	350	10	200.0	196.6	76.2	70	130			
Surr: 1,2-Dichloroethane-d4	85		100.0		85.5	70	130			
Surr: 4-Bromofluorobenzene	82		100.0		82.1	70	130			
Surr: Dibromofluoromethane	85		100.0		85.0	70	130			
Surr: Toluene-d8	100		100.0		99.5	70	130			

Sample ID 1611263-002amsd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: MKTF-37	Batch ID: R38668		RunNo: 38668							
Prep Date:	Analysis Date: 11/11/2016		SeqNo: 1207649		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1100	10	200.0	958.3	57.8	70	130	5.54	20	ES
Toluene	210	10	200.0	11.86	97.0	70	130	2.74	20	
Chlorobenzene	190	10	200.0	0	94.9	70	130	0.0854	20	
1,1-Dichloroethene	270	10	200.0	109.8	81.2	70	130	5.10	20	
Trichloroethene (TCE)	330	10	200.0	196.6	65.1	70	130	6.56	20	S
Surr: 1,2-Dichloroethane-d4	87		100.0		86.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	83		100.0		83.4	70	130	0	0	
Surr: Dibromofluoromethane	80		100.0		80.2	70	130	0	0	
Surr: Toluene-d8	100		100.0		102	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	Ics-28498		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 28498		RunNo: 38590					
Prep Date:	11/7/2016		Analysis Date: 11/9/2016		SeqNo: 1205303		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	65.8	42.9	100			
4-Chloro-3-methylphenol	160	10	200.0	0	81.4	36.2	110			
2-Chlorophenol	140	10	200.0	0	72.3	33.4	97.8			
1,4-Dichlorobenzene	53	10	100.0	0	52.9	32.8	79.3			
2,4-Dinitrotoluene	63	10	100.0	0	62.8	34.9	107			
N-Nitrosodi-n-propylamine	71	10	100.0	0	71.1	30.7	111			
4-Nitrophenol	100	10	200.0	0	50.6	15	91.9			
Pentachlorophenol	110	20	200.0	0	56.9	33.3	93.5			
Phenol	110	10	200.0	0	57.2	20.9	86.4			
Pyrene	68	10	100.0	0	68.2	45.6	111			
1,2,4-Trichlorobenzene	63	10	100.0	0	62.8	38.7	88.2			
Surr: 2-Fluorophenol	120		200.0		61.2	15	98.1			
Surr: Phenol-d5	110		200.0		57.2	15	80.7			
Surr: 2,4,6-Tribromophenol	130		200.0		65.7	15	112			
Surr: Nitrobenzene-d5	71		100.0		71.2	27.2	90.7			
Surr: 2-Fluorobiphenyl	64		100.0		64.5	23.3	85.6			
Surr: 4-Terphenyl-d14	60		100.0		59.5	27.6	107			

Sample ID	Icsd-28498		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 28498		RunNo: 38590					
Prep Date:	11/7/2016		Analysis Date: 11/9/2016		SeqNo: 1205304		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.2	42.9	100	0.886	0	
4-Chloro-3-methylphenol	140	10	200.0	0	71.7	36.2	110	12.7	0	
2-Chlorophenol	130	10	200.0	0	63.8	33.4	97.8	12.6	0	
1,4-Dichlorobenzene	55	10	100.0	0	54.9	32.8	79.3	3.60	0	
2,4-Dinitrotoluene	61	10	100.0	0	61.1	34.9	107	2.68	0	
N-Nitrosodi-n-propylamine	72	10	100.0	0	72.2	30.7	111	1.51	0	
4-Nitrophenol	93	10	200.0	0	46.5	15	91.9	8.57	0	
Pentachlorophenol	110	20	200.0	0	55.2	33.3	93.5	3.10	0	
Phenol	100	10	200.0	0	52.4	20.9	86.4	8.78	0	
Pyrene	65	10	100.0	0	64.7	45.6	111	5.30	0	
1,2,4-Trichlorobenzene	63	10	100.0	0	62.6	38.7	88.2	0.319	0	
Surr: 2-Fluorophenol	110		200.0		53.1	15	98.1	0	0	
Surr: Phenol-d5	110		200.0		53.4	15	80.7	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.1	15	112	0	0	
Surr: Nitrobenzene-d5	67		100.0		66.8	27.2	90.7	0	0	
Surr: 2-Fluorobiphenyl	60		100.0		59.5	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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	lcsd-28498		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 28498		RunNo: 38590					
Prep Date:	11/7/2016		Analysis Date: 11/9/2016		SeqNo: 1205304		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	57		100.0		57.5	27.6	107	0	0	

Sample ID	mb-28498		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 28498		RunNo: 38590					
Prep Date:	11/7/2016		Analysis Date: 11/9/2016		SeqNo: 1205305		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	10	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	7.1	10								J
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	3.0	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	8.2	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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	mb-28498	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	28498	RunNo:	38590					
Prep Date:	11/7/2016	Analysis Date:	11/9/2016	SeqNo:	1205305	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	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								
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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID mb-28498	SampType: MBLK			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW	Batch ID: 28498			RunNo: 38590						
Prep Date: 11/7/2016	Analysis Date: 11/9/2016			SeqNo: 1205305		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	100		200.0		50.0	15	98.1			
Surr: Phenol-d5	87		200.0		43.7	15	80.7			
Surr: 2,4,6-Tribromophenol	160		200.0		80.8	15	112			
Surr: Nitrobenzene-d5	68		100.0		68.5	27.2	90.7			
Surr: 2-Fluorobiphenyl	65		100.0		65.3	23.3	85.6			
Surr: 4-Terphenyl-d14	72		100.0		71.9	27.6	107			

Sample ID lcs-28584	SampType: LCS			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: LCSW	Batch ID: 28584			RunNo: 38737						
Prep Date: 11/10/2016	Analysis Date: 11/15/2016			SeqNo: 1210297		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	76	10	100.0	0	75.5	42.9	100			
4-Chloro-3-methylphenol	170	10	200.0	0	86.0	36.2	110			
2-Chlorophenol	140	10	200.0	0	71.8	33.4	97.8			
1,4-Dichlorobenzene	61	10	100.0	0	60.9	32.8	79.3			
2,4-Dinitrotoluene	71	10	100.0	0	70.8	34.9	107			
N-Nitrosodi-n-propylamine	74	10	100.0	0	73.5	30.7	111			
4-Nitrophenol	120	10	200.0	0	61.3	15	91.9			
Pentachlorophenol	130	20	200.0	0	64.8	33.3	93.5			
Phenol	120	10	200.0	0	60.2	20.9	86.4			
Pyrene	66	10	100.0	0	66.1	45.6	111			
1,2,4-Trichlorobenzene	73	10	100.0	0	72.8	38.7	88.2			
Surr: 2-Fluorophenol	130		200.0		66.1	15	98.1			
Surr: Phenol-d5	130		200.0		63.4	15	80.7			
Surr: 2,4,6-Tribromophenol	160		200.0		79.1	15	112			
Surr: Nitrobenzene-d5	72		100.0		71.9	27.2	90.7			
Surr: 2-Fluorobiphenyl	72		100.0		72.2	23.3	85.6			
Surr: 4-Terphenyl-d14	67		100.0		67.3	27.6	107			

Sample ID mb-28584	SampType: MBLK			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW	Batch ID: 28584			RunNo: 38737						
Prep Date: 11/10/2016	Analysis Date: 11/15/2016			SeqNo: 1210298		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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	mb-28584	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	28584	RunNo:	38737					
Prep Date:	11/10/2016	Analysis Date:	11/15/2016	SeqNo:	1210298	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	11	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	7.1	10								J
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	7.6	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								

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#: 1611263

13-Dec-16

Client: Western Refining Southwest, Gallup

Project: 2016 4th QTR MKTF

Sample ID	mb-28584		SampType:	MBLK		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	PBW		Batch ID:	28584		RunNo:	38737			
Prep Date:	11/10/2016		Analysis Date:	11/15/2016		SeqNo:	1210298	Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	79		200.0		39.5	15	98.1			
Surr: Phenol-d5	61		200.0		30.4	15	80.7			
Surr: 2,4,6-Tribromophenol	110		200.0		56.8	15	112			
Surr: Nitrobenzene-d5	55		100.0		54.7	27.2	90.7			
Surr: 2-Fluorobiphenyl	45		100.0		45.2	23.3	85.6			
Surr: 4-Terphenyl-d14	52		100.0		51.9	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



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: 1611263

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

11/4/2016 2:05:00 PM

Completed By: Ashley Gallegos

11/4/2016 6:21:04 PM

Reviewed By:

Chain of Custody

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

Log In

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

Adjusted? <2 or >12 unless noted

Checked by: [Signature]

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Turn-Around Time:

Chain-of-Custody Record		Turn-Around Time:
Client: WESTERN REFINING SW, INC.	☒ Standard ☐ Rush	Project Name:
BALLUP REFINERY	Project #:	
Mailing Address: 92 GIANT CROSSING RD		2016 4TH QTR (MKTF)

Phone #:	505-722-0231
Mail or Fax#:	CHERYL.JOHNSON@
VQC Package:	WNR.COM
Standard	☒ Level 4 (Full Validation)
Accreditation	
NELAP	☐ Other
EDD (Type)	EXCEL

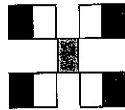
Project Manager:	CHERYL JOHNSON
Sampler:	TRACY PAYNE
On Ice:	☒ Yes ☐ No
Sample Temperature:	1.5

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3/16	1645	WATER	MKTF-37	500 ML PLASTIC-1	HNO ₃	1211203
				125 ML PLASTIC-1	HNO ₃	-000
				125 ML PLASTIC-1	H ₂ SO ₄	
				500 ML PLASTIC-1	NEAT	

[illegible]

ate: 4/16	Time: 0730	Relinquished by: [Signature]	Received by: [Signature]	Date: 4/16/16	Time: 1135
ate: 4/16	Time: 1405	Relinquished by: [Signature]	Received by: [Signature]	Date: 4/16/16	Time: 1405

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



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]



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

December 22, 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.: 1611492

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/8/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-17

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:10:00 AM

Lab ID: 1611492-001

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: JME	
Diesel Range Organics (DRO)	1.3	0.69	1.0		mg/L	1	11/14/2016 7:35:47 PM	28621
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/14/2016 7:35:47 PM	28621
Surr: DNOP	101	0	77.1-144		%Rec	1	11/14/2016 7:35:47 PM	28621
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	4.5	0.51	1.0		mg/L	20	11/10/2016 11:11:56 PM	G38599
Surr: BFB	95.8	0	66.4-120		%Rec	20	11/10/2016 11:11:56 PM	G38599
EPA METHOD 300.0: ANIONS								
							Analyst: MRA	
Fluoride	0.77	0.050	0.10		mg/L	1	11/14/2016 9:50:13 PM	R38701
Chloride	64	1.0	10		mg/L	20	11/14/2016 10:02:38 PM	R38701
Bromide	0.49	0.044	0.10		mg/L	1	11/14/2016 9:50:13 PM	R38701
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/14/2016 9:50:13 PM	R38701
Sulfate	45	2.8	10		mg/L	20	11/14/2016 10:02:38 PM	R38701
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/17/2016 12:05:52 AM	A38771
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	0.52	0.0013	0.0020		mg/L	1	12/2/2016 1:44:12 PM	A39111
Cadmium	ND	0.00075	0.0020		mg/L	1	12/2/2016 1:44:12 PM	A39111
Calcium	100	2.5	5.0		mg/L	5	12/2/2016 1:50:11 PM	A39111
Chromium	ND	0.0018	0.0060		mg/L	1	12/2/2016 1:44:12 PM	A39111
Copper	ND	0.0040	0.0060		mg/L	1	12/2/2016 1:44:12 PM	A39111
Iron	0.21	0.020	0.020		mg/L	1	12/2/2016 1:44:12 PM	A39111
Magnesium	21	0.50	1.0		mg/L	1	12/2/2016 1:44:12 PM	A39111
Manganese	2.7	0.0016	0.010	*	mg/L	5	12/2/2016 1:50:11 PM	A39111
Potassium	0.85	0.50	1.0	J	mg/L	1	12/6/2016 4:11:33 PM	A39177
Silver	ND	0.0028	0.0050		mg/L	1	12/2/2016 1:44:12 PM	A39111
Sodium	250	5.0	10		mg/L	10	12/6/2016 6:53:01 PM	A39177
Zinc	ND	0.0028	0.010		mg/L	1	12/2/2016 1:44:12 PM	A39111
EPA METHOD 200.7: TOTAL METALS								
							Analyst: TES	
Barium	0.60	0.0040	0.010		mg/L	5	12/5/2016 8:25:51 PM	28977
Cadmium	ND	0.0015	0.0020		mg/L	1	12/5/2016 8:20:33 PM	28977
Chromium	ND	0.0027	0.0060		mg/L	1	12/5/2016 8:20:33 PM	28977
Copper	ND	0.0030	0.0060		mg/L	1	12/5/2016 8:20:33 PM	28977
Iron	1.9	0.10	0.10	*	mg/L	5	12/16/2016 3:15:10 PM	28977
Manganese	2.8	0.0014	0.010	*	mg/L	5	12/5/2016 8:25:51 PM	28977
Silver	ND	0.0015	0.0050		mg/L	1	12/5/2016 8:20:33 PM	28977
Zinc	0.0068	0.0027	0.010	J	mg/L	1	12/5/2016 8:20:33 PM	28977
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.0046	0.00014	0.0010		mg/L	1	11/23/2016 4:51:29 PM	B38954

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 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-17

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:10:00 AM

Lab ID: 1611492-001

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 PM

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	11/23/2016 4:51:29 PM	B38954
Selenium	0.0030	0.00021	0.0010		mg/L	1	11/23/2016 4:51:29 PM	B38954
Uranium	0.0069	0.000051	0.00050		mg/L	1	11/23/2016 4:51:29 PM	B38954
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.0064	0.00021	0.0010		mg/L	1	12/5/2016 1:58:10 PM	28977
Lead	0.0013	0.000081	0.00050		mg/L	1	12/5/2016 1:58:10 PM	28977
Selenium	0.0034	0.00094	0.0050	J	mg/L	5	12/7/2016 11:46:32 AM	28977
Uranium	0.0077	0.00017	0.00050		mg/L	1	12/5/2016 1:58:10 PM	28977
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.00027	0.0010		mg/L	5	11/23/2016 6:36:43 PM	28845
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Acenaphthylene	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Aniline	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Anthracene	ND	2.5	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Azobenzene	ND	2.7	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Benzoic acid	ND	2.6	20		µg/L	1	11/15/2016 12:27:31 PM	28584
Benzyl alcohol	ND	3.0	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Bis(2-ethylhexyl)phthalate	6.9	2.6	10	J	µg/L	1	11/15/2016 12:27:31 PM	28584
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Butyl benzyl phthalate	2.7	2.5	10	J	µg/L	1	11/15/2016 12:27:31 PM	28584
Carbazole	ND	2.3	10		µg/L	1	11/15/2016 12:27:31 PM	28584
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
4-Chloroaniline	ND	2.7	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2-Chlorophenol	ND	2.2	10		µg/L	1	11/15/2016 12:27:31 PM	28584
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Chrysene	ND	2.8	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Di-n-octyl phthalate	7.0	2.0	10	J	µg/L	1	11/15/2016 12:27:31 PM	28584

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-17

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:10:00 AM

Lab ID: 1611492-001

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 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	11/15/2016 12:27:31 PM	28584
Dibenzofuran	ND	2.5	10		µg/L	1	11/15/2016 12:27:31 PM	28584
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/15/2016 12:27:31 PM	28584
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/15/2016 12:27:31 PM	28584
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Diethyl phthalate	ND	2.7	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Dimethyl phthalate	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/15/2016 12:27:31 PM	28584
2,4-Dimethylphenol	ND	3.0	10		µg/L	1	11/15/2016 12:27:31 PM	28584
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/15/2016 12:27:31 PM	28584
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/15/2016 12:27:31 PM	28584
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Fluoranthene	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Fluorene	3.0	2.7	10	J	µg/L	1	11/15/2016 12:27:31 PM	28584
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Hexachloroethane	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Isophorone	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
1-Methylnaphthalene	11	2.9	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2-Methylnaphthalene	ND	2.9	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2-Methylphenol	ND	2.5	10		µg/L	1	11/15/2016 12:27:31 PM	28584
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/15/2016 12:27:31 PM	28584
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/15/2016 12:27:31 PM	28584
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Naphthalene	7.7	2.6	10	J	µg/L	1	11/15/2016 12:27:31 PM	28584
2-Nitroaniline	ND	2.8	10		µg/L	1	11/15/2016 12:27:31 PM	28584
3-Nitroaniline	ND	2.9	10		µg/L	1	11/15/2016 12:27:31 PM	28584
4-Nitroaniline	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Nitrobenzene	ND	2.8	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2-Nitrophenol	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
4-Nitrophenol	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Pentachlorophenol	ND	2.3	20		µg/L	1	11/15/2016 12:27:31 PM	28584
Phenanthrene	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Phenol	3.5	2.0	10	J	µg/L	1	11/15/2016 12:27:31 PM	28584

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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 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-17

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:10:00 AM

Lab ID: 1611492-001

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 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	11/15/2016 12:27:31 PM	28584
Pyridine	ND	2.2	10		µg/L	1	11/15/2016 12:27:31 PM	28584
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/15/2016 12:27:31 PM	28584
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/15/2016 12:27:31 PM	28584
Surr: 2-Fluorophenol	24.5	0	15-98.1		%Rec	1	11/15/2016 12:27:31 PM	28584
Surr: Phenol-d5	20.2	0	15-80.7		%Rec	1	11/15/2016 12:27:31 PM	28584
Surr: 2,4,6-Tribromophenol	36.8	0	15-112		%Rec	1	11/15/2016 12:27:31 PM	28584
Surr: Nitrobenzene-d5	67.8	0	27.2-90.7		%Rec	1	11/15/2016 12:27:31 PM	28584
Surr: 2-Fluorobiphenyl	56.6	0	23.3-85.6		%Rec	1	11/15/2016 12:27:31 PM	28584
Surr: 4-Terphenyl-d14	38.1	0	27.6-107		%Rec	1	11/15/2016 12:27:31 PM	28584
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	760	4.8	50		µg/L	50	11/14/2016 10:24:51 AM	R38696
Toluene	1.9	0.59	5.0	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
Ethylbenzene	390	0.56	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Methyl tert-butyl ether (MTBE)	360	1.1	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2,4-Trimethylbenzene	1.7	0.55	5.0	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
1,3,5-Trimethylbenzene	ND	0.58	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2-Dichloroethane (EDC)	ND	0.58	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2-Dibromoethane (EDB)	ND	0.56	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Naphthalene	21	0.46	10		µg/L	5	11/14/2016 10:53:33 AM	R38696
1-Methylnaphthalene	10	1.0	20	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
2-Methylnaphthalene	3.0	0.79	20	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
Acetone	ND	25	50		µg/L	5	11/14/2016 10:53:33 AM	R38696
Bromobenzene	ND	0.49	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Bromodichloromethane	ND	0.70	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Bromoform	ND	0.51	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Bromomethane	ND	3.9	15		µg/L	5	11/14/2016 10:53:33 AM	R38696
2-Butanone	ND	3.7	50		µg/L	5	11/14/2016 10:53:33 AM	R38696
Carbon disulfide	ND	3.0	50		µg/L	5	11/14/2016 10:53:33 AM	R38696
Carbon Tetrachloride	ND	0.54	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Chlorobenzene	ND	0.57	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Chloroethane	ND	0.96	10		µg/L	5	11/14/2016 10:53:33 AM	R38696
Chloroform	ND	0.44	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Chloromethane	ND	1.1	15		µg/L	5	11/14/2016 10:53:33 AM	R38696
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
4-Chlorotoluene	ND	0.64	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
cis-1,2-DCE	ND	0.62	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
cis-1,3-Dichloropropene	ND	0.53	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696

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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 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-17

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:10:00 AM

Lab ID: 1611492-001

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,2-Dibromo-3-chloropropane	ND	1.2	10		µg/L	5	11/14/2016 10:53:33 AM	R38696
Dibromochloromethane	ND	0.43	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Dibromomethane	ND	0.60	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2-Dichlorobenzene	ND	2.0	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,3-Dichlorobenzene	ND	0.72	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,4-Dichlorobenzene	ND	0.71	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Dichlorodifluoromethane	ND	1.8	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,1-Dichloroethane	ND	0.54	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,1-Dichloroethene	ND	0.54	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2-Dichloropropane	ND	0.55	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,3-Dichloropropane	ND	0.78	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
2,2-Dichloropropane	ND	0.83	10		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,1-Dichloropropene	ND	0.67	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Hexachlorobutadiene	ND	0.99	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
2-Hexanone	ND	4.2	50		µg/L	5	11/14/2016 10:53:33 AM	R38696
Isopropylbenzene	20	0.52	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
4-Isopropyltoluene	2.3	0.70	5.0	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
4-Methyl-2-pentanone	ND	2.1	50		µg/L	5	11/14/2016 10:53:33 AM	R38696
Methylene Chloride	ND	0.94	15		µg/L	5	11/14/2016 10:53:33 AM	R38696
n-Butylbenzene	2.7	0.80	15	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
n-Propylbenzene	32	0.66	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
sec-Butylbenzene	3.5	0.62	5.0	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
Styrene	ND	0.55	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
tert-Butylbenzene	ND	0.58	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,1,1,2-Tetrachloroethane	ND	0.56	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,1,2,2-Tetrachloroethane	ND	0.64	10		µg/L	5	11/14/2016 10:53:33 AM	R38696
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
trans-1,2-DCE	ND	2.0	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
trans-1,3-Dichloropropene	ND	0.52	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2,3-Trichlorobenzene	ND	0.56	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2,4-Trichlorobenzene	ND	0.66	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,1,1-Trichloroethane	ND	0.46	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,1,2-Trichloroethane	ND	0.64	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Trichloroethene (TCE)	ND	0.88	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Trichlorofluoromethane	ND	1.0	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
1,2,3-Trichloropropane	ND	1.0	10		µg/L	5	11/14/2016 10:53:33 AM	R38696
Vinyl chloride	ND	0.98	5.0		µg/L	5	11/14/2016 10:53:33 AM	R38696
Xylenes, Total	4.3	1.8	7.5	J	µg/L	5	11/14/2016 10:53:33 AM	R38696
Surr: 1,2-Dichloroethane-d4	94.6	0	70-130		%Rec	5	11/14/2016 10:53:33 AM	R38696

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-17

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:10:00 AM

Lab ID: 1611492-001

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Surr: 4-Bromofluorobenzene	94.2	0	70-130		%Rec	5	11/14/2016 10:53:33 AM	R38696
Surr: Dibromofluoromethane	97.7	0	70-130		%Rec	5	11/14/2016 10:53:33 AM	R38696
Surr: Toluene-d8	101	0	70-130		%Rec	5	11/14/2016 10:53:33 AM	R38696

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-19

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:45:00 AM

Lab ID: 1611492-002

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE								
							Analyst: JME	
Diesel Range Organics (DRO)	6.7	0.69	1.0		mg/L	1	11/14/2016 8:56:43 PM	28621
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/14/2016 8:56:43 PM	28621
Surr: DNOP	100	0	77.1-144		%Rec	1	11/14/2016 8:56:43 PM	28621
EPA METHOD 8015D: GASOLINE RANGE								
							Analyst: NSB	
Gasoline Range Organics (GRO)	26	1.3	2.5		mg/L	50	11/10/2016 11:36:16 PM	G38599
Surr: BFB	91.6	0	66.4-120		%Rec	50	11/10/2016 11:36:16 PM	G38599
EPA METHOD 300.0: ANIONS								
							Analyst: MRA	
Fluoride	0.28	0.050	0.10		mg/L	1	11/14/2016 10:39:53 PM	R38701
Chloride	110	1.0	10		mg/L	20	11/14/2016 10:52:17 PM	R38701
Bromide	0.55	0.044	0.10		mg/L	1	11/14/2016 10:39:53 PM	R38701
Phosphorus, Orthophosphate (As P)	ND	0.076	0.50	H	mg/L	1	11/14/2016 10:39:53 PM	R38701
Sulfate	0.89	0.14	0.50		mg/L	1	11/14/2016 10:39:53 PM	R38701
Nitrate+Nitrite as N	ND	0.46	1.0		mg/L	5	11/17/2016 12:18:16 AM	A38771
EPA METHOD 200.7: DISSOLVED METALS								
							Analyst: MED	
Barium	1.6	0.013	0.020		mg/L	10	12/6/2016 4:19:10 PM	A39177
Cadmium	ND	0.00075	0.0020		mg/L	1	12/5/2016 7:12:41 PM	A39164
Calcium	150	5.0	10		mg/L	10	12/6/2016 4:19:10 PM	A39177
Chromium	ND	0.0018	0.0060		mg/L	1	12/5/2016 7:12:41 PM	A39164
Copper	ND	0.0040	0.0060		mg/L	1	12/5/2016 7:12:41 PM	A39164
Iron	8.5	0.20	0.20	*	mg/L	10	12/6/2016 4:19:10 PM	A39177
Magnesium	29	0.50	1.0		mg/L	1	12/6/2016 4:17:29 PM	A39177
Manganese	2.2	0.0032	0.020	*	mg/L	10	12/6/2016 4:19:10 PM	A39177
Potassium	1.3	0.50	1.0		mg/L	1	12/6/2016 4:17:29 PM	A39177
Silver	ND	0.0028	0.0050		mg/L	1	12/5/2016 7:12:41 PM	A39164
Sodium	290	5.0	10		mg/L	10	12/6/2016 4:19:10 PM	A39177
Zinc	0.0091	0.0028	0.010	J	mg/L	1	12/5/2016 7:12:41 PM	A39164
EPA METHOD 200.7: TOTAL METALS								
							Analyst: TES	
Barium	2.2	0.0040	0.010	*	mg/L	5	12/5/2016 8:44:39 PM	28977
Cadmium	ND	0.0015	0.0020		mg/L	1	12/5/2016 8:31:50 PM	28977
Chromium	0.0088	0.0027	0.0060		mg/L	1	12/5/2016 8:31:50 PM	28977
Copper	0.015	0.0030	0.0060		mg/L	1	12/5/2016 8:31:50 PM	28977
Iron	33	1.0	1.0	*	mg/L	50	12/6/2016 6:54:56 PM	28977
Manganese	2.6	0.0014	0.010	*	mg/L	5	12/5/2016 8:44:39 PM	28977
Silver	ND	0.0015	0.0050		mg/L	1	12/6/2016 3:12:07 PM	28977
Zinc	0.070	0.0027	0.010		mg/L	1	12/5/2016 8:31:50 PM	28977
EPA 200.8: DISSOLVED METALS								
							Analyst: JLF	
Arsenic	0.011	0.00069	0.0050	*	mg/L	5	11/28/2016 3:23:46 PM	B39007

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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Analytical Report

Lab Order 1611492

Date Reported: 12/22/2016

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Client Sample ID: MKTF-19

Project: 2016 4th Qtr (MKTF)

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Lab ID: 1611492-002

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Lead	0.0023	0.00017	0.00050		mg/L	1	11/23/2016 4:56:38 PM	B38954
Selenium	0.0075	0.0042	0.020	J	mg/L	20	11/28/2016 3:26:49 PM	B39007
Uranium	0.0016	0.000051	0.00050		mg/L	1	11/23/2016 4:56:38 PM	B38954
200.8 ICPMS METALS:TOTAL							Analyst: JLF	
Arsenic	0.013	0.0011	0.0050	*	mg/L	5	12/7/2016 12:29:45 PM	28977
Lead	0.033	0.00041	0.0025	*	mg/L	5	12/7/2016 12:29:45 PM	28977
Selenium	0.0087	0.0037	0.020	J	mg/L	20	12/7/2016 12:34:53 PM	28977
Uranium	0.0059	0.00017	0.00050		mg/L	1	12/5/2016 2:01:11 PM	28977
EPA METHOD 245.1: MERCURY							Analyst: DBD	
Mercury	ND	0.000053	0.00020		mg/L	1	11/23/2016 6:18:13 PM	28845
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Acenaphthene	5.0	2.6	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
Acenaphthylene	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Aniline	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Anthracene	ND	2.5	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Azobenzene	ND	2.7	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Benz(a)anthracene	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Benzo(a)pyrene	ND	2.7	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Benzo(b)fluoranthene	ND	2.9	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Benzo(g,h,i)perylene	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Benzo(k)fluoranthene	ND	3.0	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Benzoic acid	ND	2.6	20		µg/L	1	11/15/2016 1:52:14 PM	28584
Benzyl alcohol	ND	3.0	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Bis(2-chloroethoxy)methane	ND	2.8	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Bis(2-chloroethyl)ether	ND	2.7	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Bis(2-chloroisopropyl)ether	ND	1.9	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Bis(2-ethylhexyl)phthalate	7.3	2.6	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
4-Bromophenyl phenyl ether	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Butyl benzyl phthalate	ND	2.5	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Carbazole	6.0	2.3	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
4-Chloro-3-methylphenol	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
4-Chloroaniline	ND	2.7	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2-Chloronaphthalene	ND	2.3	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2-Chlorophenol	ND	2.2	10		µg/L	1	11/15/2016 1:52:14 PM	28584
4-Chlorophenyl phenyl ether	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Chrysene	ND	2.8	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Di-n-butyl phthalate	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Di-n-octyl phthalate	8.0	2.0	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-19

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:45:00 AM

Lab ID: 1611492-002

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 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	11/15/2016 1:52:14 PM	28584
Dibenzofuran	ND	2.5	10		µg/L	1	11/15/2016 1:52:14 PM	28584
1,2-Dichlorobenzene	ND	2.3	10		µg/L	1	11/15/2016 1:52:14 PM	28584
1,3-Dichlorobenzene	ND	2.3	10		µg/L	1	11/15/2016 1:52:14 PM	28584
1,4-Dichlorobenzene	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
3,3'-Dichlorobenzidine	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Diethyl phthalate	ND	2.7	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Dimethyl phthalate	3.5	2.4	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
2,4-Dichlorophenol	ND	2.3	20		µg/L	1	11/15/2016 1:52:14 PM	28584
2,4-Dimethylphenol	5.6	3.0	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
4,6-Dinitro-2-methylphenol	ND	1.8	20		µg/L	1	11/15/2016 1:52:14 PM	28584
2,4-Dinitrophenol	ND	2.8	20		µg/L	1	11/15/2016 1:52:14 PM	28584
2,4-Dinitrotoluene	ND	3.1	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2,6-Dinitrotoluene	ND	2.7	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Fluoranthene	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Fluorene	7.3	2.7	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
Hexachlorobenzene	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Hexachlorobutadiene	ND	2.2	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Hexachlorocyclopentadiene	ND	2.3	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Hexachloroethane	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Indeno(1,2,3-cd)pyrene	ND	3.0	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Isophorone	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
1-Methylnaphthalene	120	2.9	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2-Methylnaphthalene	180	2.9	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2-Methylphenol	ND	2.5	10		µg/L	1	11/15/2016 1:52:14 PM	28584
3+4-Methylphenol	ND	2.3	10		µg/L	1	11/15/2016 1:52:14 PM	28584
N-Nitrosodi-n-propylamine	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
N-Nitrosodimethylamine	ND	2.2	10		µg/L	1	11/15/2016 1:52:14 PM	28584
N-Nitrosodiphenylamine	ND	2.3	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Naphthalene	270	5.2	20		µg/L	2	11/16/2016 5:09:55 PM	28584
2-Nitroaniline	ND	2.8	10		µg/L	1	11/15/2016 1:52:14 PM	28584
3-Nitroaniline	ND	2.9	10		µg/L	1	11/15/2016 1:52:14 PM	28584
4-Nitroaniline	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Nitrobenzene	ND	2.8	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2-Nitrophenol	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
4-Nitrophenol	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Pentachlorophenol	ND	2.3	20		µg/L	1	11/15/2016 1:52:14 PM	28584
Phenanthrene	5.5	2.6	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
Phenol	6.6	2.0	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611492

Date Reported: 12/22/2016

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-19

Project: 2016 4th Qtr (MKTF)

Collection Date: 11/8/2016 7:45:00 AM

Lab ID: 1611492-002

Matrix: AQUEOUS

Received Date: 11/8/2016 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM	
Pyrene	4.4	3.1	10	J	µg/L	1	11/15/2016 1:52:14 PM	28584
Pyridine	ND	2.2	10		µg/L	1	11/15/2016 1:52:14 PM	28584
1,2,4-Trichlorobenzene	ND	2.6	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2,4,5-Trichlorophenol	ND	2.2	10		µg/L	1	11/15/2016 1:52:14 PM	28584
2,4,6-Trichlorophenol	ND	2.4	10		µg/L	1	11/15/2016 1:52:14 PM	28584
Surr: 2-Fluorophenol	20.1	0	15-98.1		%Rec	1	11/15/2016 1:52:14 PM	28584
Surr: Phenol-d5	25.0	0	15-80.7		%Rec	1	11/15/2016 1:52:14 PM	28584
Surr: 2,4,6-Tribromophenol	48.2	0	15-112		%Rec	1	11/15/2016 1:52:14 PM	28584
Surr: Nitrobenzene-d5	64.0	0	27.2-90.7		%Rec	1	11/15/2016 1:52:14 PM	28584
Surr: 2-Fluorobiphenyl	54.1	0	23.3-85.6		%Rec	1	11/15/2016 1:52:14 PM	28584
Surr: 4-Terphenyl-d14	34.7	0	27.6-107		%Rec	1	11/15/2016 1:52:14 PM	28584
EPA METHOD 8260B: VOLATILES							Analyst: AG	
Benzene	1300	1.9	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Toluene	6.8	2.4	20	J	µg/L	20	11/14/2016 1:46:53 PM	R38696
Ethylbenzene	700	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Methyl tert-butyl ether (MTBE)	10000	42	200		µg/L	200	11/14/2016 1:17:49 PM	R38696
1,2,4-Trimethylbenzene	630	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,3,5-Trimethylbenzene	110	2.3	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,2-Dichloroethane (EDC)	7.0	2.3	20	J	µg/L	20	11/14/2016 1:46:53 PM	R38696
1,2-Dibromoethane (EDB)	ND	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Naphthalene	510	1.9	40		µg/L	20	11/14/2016 1:46:53 PM	R38696
1-Methylnaphthalene	220	4.1	80		µg/L	20	11/14/2016 1:46:53 PM	R38696
2-Methylnaphthalene	260	3.2	80		µg/L	20	11/14/2016 1:46:53 PM	R38696
Acetone	ND	98	200		µg/L	20	11/14/2016 1:46:53 PM	R38696
Bromobenzene	ND	2.0	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Bromodichloromethane	ND	2.8	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Bromoform	ND	2.0	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Bromomethane	ND	16	60		µg/L	20	11/14/2016 1:46:53 PM	R38696
2-Butanone	ND	15	200		µg/L	20	11/14/2016 1:46:53 PM	R38696
Carbon disulfide	ND	12	200		µg/L	20	11/14/2016 1:46:53 PM	R38696
Carbon Tetrachloride	ND	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Chlorobenzene	ND	2.3	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Chloroethane	ND	3.8	40		µg/L	20	11/14/2016 1:46:53 PM	R38696
Chloroform	ND	1.8	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Chloromethane	ND	4.3	60		µg/L	20	11/14/2016 1:46:53 PM	R38696
2-Chlorotoluene	ND	8.0	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
4-Chlorotoluene	ND	2.6	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
cis-1,2-DCE	ND	2.5	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
cis-1,3-Dichloropropene	ND	2.1	20		µg/L	20	11/14/2016 1:46:53 PM	R38696

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EPA METHOD 8260B: VOLATILES							Analyst: AG	
1,2-Dibromo-3-chloropropane	ND	4.7	40		µg/L	20	11/14/2016 1:46:53 PM	R38696
Dibromochloromethane	ND	1.7	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Dibromomethane	ND	2.4	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,2-Dichlorobenzene	ND	8.0	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,3-Dichlorobenzene	ND	2.9	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,4-Dichlorobenzene	ND	2.9	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Dichlorodifluoromethane	ND	7.1	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,1-Dichloroethane	ND	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,1-Dichloroethene	ND	2.1	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,2-Dichloropropane	ND	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,3-Dichloropropane	ND	3.1	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
2,2-Dichloropropane	ND	3.3	40		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,1-Dichloropropene	ND	2.7	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Hexachlorobutadiene	ND	4.0	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
2-Hexanone	ND	17	200		µg/L	20	11/14/2016 1:46:53 PM	R38696
Isopropylbenzene	32	2.1	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
4-Isopropyltoluene	6.2	2.8	20	J	µg/L	20	11/14/2016 1:46:53 PM	R38696
4-Methyl-2-pentanone	ND	8.6	200		µg/L	20	11/14/2016 1:46:53 PM	R38696
Methylene Chloride	ND	3.7	60		µg/L	20	11/14/2016 1:46:53 PM	R38696
n-Butylbenzene	14	3.2	60	J	µg/L	20	11/14/2016 1:46:53 PM	R38696
n-Propylbenzene	84	2.6	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
sec-Butylbenzene	8.8	2.5	20	J	µg/L	20	11/14/2016 1:46:53 PM	R38696
Styrene	ND	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
tert-Butylbenzene	ND	2.3	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,1,1,2-Tetrachloroethane	ND	2.2	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,1,2,2-Tetrachloroethane	ND	2.6	40		µg/L	20	11/14/2016 1:46:53 PM	R38696
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
trans-1,2-DCE	ND	8.0	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
trans-1,3-Dichloropropene	ND	2.1	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,2,4-Trichlorobenzene	ND	2.7	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,1,1-Trichloroethane	ND	1.8	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,1,2-Trichloroethane	ND	2.5	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Trichloroethene (TCE)	ND	3.5	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Trichlorofluoromethane	ND	4.1	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
1,2,3-Trichloropropane	ND	4.0	40		µg/L	20	11/14/2016 1:46:53 PM	R38696
Vinyl chloride	ND	3.9	20		µg/L	20	11/14/2016 1:46:53 PM	R38696
Xylenes, Total	1000	7.3	30		µg/L	20	11/14/2016 1:46:53 PM	R38696
Surr: 1,2-Dichloroethane-d4	95.5	0	70-130		%Rec	20	11/14/2016 1:46:53 PM	R38696

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