

AP-111

AGWMR (12)

2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-5**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 2:25:00 PM**Lab ID:** 1403217-001**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyridine	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Surr: 2-Fluorophenol	5.63	22.7-98	S	%REC	1	3/12/2014 8:15:50 PM	12139
Surr: Phenol-d5	19.4	23.4-74.9	S	%REC	1	3/12/2014 8:15:50 PM	12139
Surr: 2,4,6-Tribromophenol	11.1	23.3-111	S	%REC	1	3/12/2014 8:15:50 PM	12139
Surr: Nitrobenzene-d5	89.7	36.8-111		%REC	1	3/12/2014 8:15:50 PM	12139
Surr: 2-Fluorobiphenyl	74.7	38.3-110		%REC	1	3/12/2014 8:15:50 PM	12139
Surr: 4-Terphenyl-d14	76.3	52.1-116		%REC	1	3/12/2014 8:15:50 PM	12139
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Toluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Ethylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Naphthalene	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:17:15 AM	R17213
Acetone	280	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromodichloromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromoform	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromomethane	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Butanone	ND	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Carbon disulfide	120	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chloroethane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chloroform	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chloromethane	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1403217

Date Reported: 3/25/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-5

Project: Q1-2014 Groundwater Sampling

Collection Date: 3/5/2014 2:25:00 PM

Lab ID: 1403217-001

Matrix: AQUEOUS

Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Dibromochloromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Dibromomethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Hexanone	ND	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Isopropylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Methylene Chloride	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
n-Butylbenzene	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
n-Propylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Styrene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
Vinyl chloride	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Xylenes, Total	ND	15		µg/L	10	3/11/2014 4:17:15 AM	R17213
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213
Surr: 4-Bromofluorobenzene	102	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-5**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 2:25:00 PM**Lab ID:** 1403217-001**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Surr: Dibromofluoromethane	107	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213
Surr: Toluene-d8	96.7	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213
EPA METHOD 410.4: COD							Analyst: SUB
Chemical Oxygen Demand	1000	20		mg/L	2	3/11/2014	R17540
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JML
Conductivity	16000	0.025		µmhos/cm	2.5	3/6/2014 6:26:10 PM	R17167
SM4500-H+B: PH							Analyst: JML
pH	7.83	1.68	H	pH units	1	3/6/2014 1:53:26 PM	R17167

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-4**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 2:50:00 PM**Lab ID:** 1403217-002**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	18	1.0	*	mg/L	10	3/7/2014 2:17:34 AM	R17173
Chloride	4300	250		mg/L	500	3/12/2014 3:09:52 AM	R17244
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Bromide	3.1	1.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Sulfate	650	50		mg/L	100	3/7/2014 2:30:00 AM	R17173
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.13	0.0020		mg/L	1	3/6/2014 4:01:59 PM	R17148
Cadmium	ND	0.0020		mg/L	1	3/6/2014 4:01:59 PM	R17148
Calcium	310	5.0		mg/L	5	3/6/2014 4:04:03 PM	R17148
Chromium	0.012	0.0060		mg/L	1	3/6/2014 4:01:59 PM	R17148
Copper	ND	0.0060		mg/L	1	3/6/2014 4:01:59 PM	R17148
Iron	0.58	0.020	*	mg/L	1	3/6/2014 4:01:59 PM	R17148
Magnesium	84	1.0		mg/L	1	3/6/2014 4:01:59 PM	R17148
Manganese	0.43	0.0020	*	mg/L	1	3/6/2014 4:01:59 PM	R17148
Potassium	170	5.0		mg/L	5	3/6/2014 4:04:03 PM	R17148
Silver	ND	0.0050		mg/L	1	3/11/2014 3:04:41 PM	R17234
Sodium	2800	50		mg/L	50	3/7/2014 4:00:32 PM	R17186
Zinc	ND	0.010		mg/L	1	3/6/2014 4:01:59 PM	R17148
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.14	0.010		mg/L	5	3/12/2014 2:29:21 PM	12082
Cadmium	ND	0.010		mg/L	5	3/12/2014 2:29:21 PM	12082
Chromium	ND	0.030		mg/L	5	3/12/2014 2:29:21 PM	12082
Copper	ND	0.030		mg/L	5	3/12/2014 2:29:21 PM	12082
Iron	0.99	0.10	*	mg/L	5	3/12/2014 2:29:21 PM	12082
Manganese	0.43	0.010	*	mg/L	5	3/12/2014 2:29:21 PM	12082
Silver	ND	0.025		mg/L	5	3/12/2014 2:29:21 PM	12082
Zinc	ND	0.050		mg/L	5	3/12/2014 3:56:25 PM	12082
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	ND	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
Lead	ND	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
Selenium	0.021	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
Uranium	ND	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.012	0.010	*	mg/L	10	3/14/2014 4:18:45 PM	12082
Lead	ND	0.010		mg/L	10	3/14/2014 4:18:45 PM	12082

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	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-4**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 2:50:00 PM**Lab ID:** 1403217-002**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Selenium	0.018	0.010		mg/L	10	3/14/2014 4:18:45 PM	12082
Uranium	ND	0.010		mg/L	10	3/14/2014 4:18:45 PM	12082
EPA METHOD 245.1: MERCURY							Analyst: JML
Mercury	ND	0.00020		mg/L	1	3/11/2014 12:16:29 PM	12102
SM5210B: BOD							Analyst: SMS
Biochemical Oxygen Demand	500	2.0		mg/L	1	3/12/2014 3:12:00 PM	12083
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: ECH
E. Coli	1.0	1.000	H	CFU/100ml	1	3/7/2014 2:40:00 PM	12058
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Aniline	40	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Carbazole	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139

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Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-4**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 2:50:00 PM**Lab ID:** 1403217-002**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Dibenzofuran	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
3,3'-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dimethylphenol	22	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Methylphenol	80	10		µg/L	1	3/12/2014 5:21:48 PM	12139
3+4-Methylphenol	210	50		µg/L	5	3/13/2014 2:18:10 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Phenol	420	50		µg/L	5	3/13/2014 2:18:10 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403217

Date Reported: 3/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-4

Project: Q1-2014 Groundwater Sampling

Collection Date: 3/5/2014 2:50:00 PM

Lab ID: 1403217-002

Matrix: AQUEOUS

Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyridine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Surr: 2-Fluorophenol	25.5	22.7-98		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: Phenol-d5	31.4	23.4-74.9		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: 2,4,6-Tribromophenol	38.1	23.3-111		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: Nitrobenzene-d5	95.6	36.8-111		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: 2-Fluorobiphenyl	77.9	38.3-110		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: 4-Terphenyl-d14	71.4	52.1-116		%REC	1	3/12/2014 5:21:48 PM	12139
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Toluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Ethylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Naphthalene	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:46:02 AM	R17213
Acetone	310	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromodichloromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromoform	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromomethane	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Butanone	ND	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Carbon disulfide	150	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chloroethane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chloroform	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chloromethane	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-4**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 2:50:00 PM**Lab ID:** 1403217-002**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Dibromochloromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Dibromomethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Hexanone	ND	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Isopropylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Methylene Chloride	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
n-Butylbenzene	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
n-Propylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Styrene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
Vinyl chloride	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Xylenes, Total	ND	15		µg/L	10	3/11/2014 4:46:02 AM	R17213
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213
Surr: 4-Bromofluorobenzene	111	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-4**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 2:50:00 PM**Lab ID:** 1403217-002**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Surr: Dibromofluoromethane	105	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213
Surr: Toluene-d8	95.7	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213
EPA METHOD 410.4: COD							Analyst: SUB
Chemical Oxygen Demand	1000	10		mg/L	1	3/10/2014	R17540
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JML
Conductivity	14000	0.025		µmhos/cm	2.5	3/6/2014 6:30:19 PM	R17167
SM4500-H+B: PH							Analyst: JML
pH	7.84	1.68	H	pH units	1	3/6/2014 1:59:18 PM	R17167

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1403217

Date Reported: 3/25/2014

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** EP-3**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 3:30:00 PM**Lab ID:** 1403217-003**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	23	1.0	*	mg/L	10	3/7/2014 2:42:25 AM	R17173
Chloride	3700	250		mg/L	500	3/12/2014 3:22:16 AM	R17244
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Bromide	3.2	1.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Sulfate	670	50		mg/L	100	3/7/2014 2:54:50 AM	R17173
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.13	0.0020		mg/L	1	3/6/2014 4:16:12 PM	R17148
Cadmium	ND	0.0020		mg/L	1	3/6/2014 4:16:12 PM	R17148
Calcium	270	5.0		mg/L	5	3/6/2014 4:18:18 PM	R17148
Chromium	0.013	0.0060		mg/L	1	3/6/2014 4:16:12 PM	R17148
Copper	ND	0.0060		mg/L	1	3/6/2014 4:16:12 PM	R17148
Iron	0.65	0.020	*	mg/L	1	3/6/2014 4:16:12 PM	R17148
Magnesium	73	1.0		mg/L	1	3/6/2014 4:16:12 PM	R17148
Manganese	0.41	0.0020	*	mg/L	1	3/6/2014 4:16:12 PM	R17148
Potassium	170	5.0		mg/L	5	3/6/2014 4:18:18 PM	R17148
Silver	ND	0.0050		mg/L	1	3/11/2014 3:06:39 PM	R17234
Sodium	2400	50		mg/L	50	3/7/2014 4:04:15 PM	R17186
Zinc	ND	0.010		mg/L	1	3/6/2014 4:16:12 PM	R17148
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.15	0.010		mg/L	5	3/12/2014 2:31:14 PM	12082
Cadmium	ND	0.010		mg/L	5	3/12/2014 2:31:14 PM	12082
Chromium	ND	0.030		mg/L	5	3/12/2014 2:31:14 PM	12082
Copper	ND	0.030		mg/L	5	3/12/2014 2:31:14 PM	12082
Iron	1.0	0.10	*	mg/L	5	3/12/2014 2:31:14 PM	12082
Manganese	0.41	0.010	*	mg/L	5	3/12/2014 2:31:14 PM	12082
Silver	ND	0.025		mg/L	5	3/12/2014 2:31:14 PM	12082
Zinc	ND	0.050		mg/L	5	3/12/2014 3:57:36 PM	12082
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	ND	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
Lead	ND	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
Selenium	0.021	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
Uranium	ND	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.011	0.010	*	mg/L	10	3/14/2014 4:22:12 PM	12082
Lead	ND	0.010		mg/L	10	3/14/2014 4:22:12 PM	12082

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-3**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 3:30:00 PM**Lab ID:** 1403217-003**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Selenium	0.019	0.010		mg/L	10	3/14/2014 4:22:12 PM	12082
Uranium	ND	0.010		mg/L	10	3/14/2014 4:22:12 PM	12082
EPA METHOD 245.1: MERCURY							Analyst: JML
Mercury	ND	0.00020		mg/L	1	3/11/2014 12:18:15 PM	12102
SM5210B: BOD							Analyst: SMS
Biochemical Oxygen Demand	440	2.0		mg/L	1	3/12/2014 3:12:00 PM	12083
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: ECH
E. Coli	122	10.00	H	CFU/100ml	10	3/7/2014 2:40:00 PM	12058
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Aniline	45	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Carbazole	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-3**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 3:30:00 PM**Lab ID:** 1403217-003**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Dibenzofuran	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
3,3'-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dimethylphenol	26	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Methylphenol	110	10		µg/L	1	3/12/2014 3:26:00 PM	12139
3+4-Methylphenol	290	100		µg/L	10	3/13/2014 2:47:18 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Phenol	790	100		µg/L	10	3/13/2014 2:47:18 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1403217

Date Reported: 3/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-3

Project: Q1-2014 Groundwater Sampling

Collection Date: 3/5/2014 3:30:00 PM

Lab ID: 1403217-003

Matrix: AQUEOUS

Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyridine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Surr: 2-Fluorophenol	58.3	22.7-98		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: Phenol-d5	54.2	23.4-74.9		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: 2,4,6-Tribromophenol	87.3	23.3-111		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: Nitrobenzene-d5	108	36.8-111		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: 2-Fluorobiphenyl	79.7	38.3-110		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: 4-Terphenyl-d14	84.8	52.1-116		%REC	1	3/12/2014 3:26:00 PM	12139
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Toluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Ethylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Naphthalene	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 5:14:44 AM	R17213
Acetone	300	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromodichloromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromoform	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromomethane	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Butanone	ND	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Carbon disulfide	140	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chloroethane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chloroform	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chloromethane	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-3**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 3:30:00 PM**Lab ID:** 1403217-003**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: cadg			
Dibromochloromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Dibromomethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Hexanone	ND	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Isopropylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Methylene Chloride	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
n-Butylbenzene	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
n-Propylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Styrene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
Vinyl chloride	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Xylenes, Total	ND	15		µg/L	10	3/11/2014 5:14:44 AM	R17213
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213
Surr: 4-Bromofluorobenzene	104	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** EP-3**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 3:30:00 PM**Lab ID:** 1403217-003**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Surr: Dibromofluoromethane	113	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213
Surr: Toluene-d8	98.1	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213
EPA METHOD 410.4: COD							Analyst: SUB
Chemical Oxygen Demand	990	10		mg/L	1	3/10/2014	R17540
SM2510B: SPECIFIC CONDUCTANCE							Analyst: JML
Conductivity	12000	0.025		µmhos/cm	2.5	3/6/2014 6:34:27 PM	R17167
SM4500-H+B: PH							Analyst: JML
pH	7.85	1.68	H	pH units	1	3/6/2014 2:03:47 PM	R17167

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** BW to EP-2**Project:** Q1-2014 Groundwater Sampling**Collection Date:** 3/5/2014 3:45:00 PM**Lab ID:** 1403217-004**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	ND	0.10		mg/L	1	3/7/2014 3:32:04 AM	R17173
Chloride	2800	100		mg/L	200	3/12/2014 3:34:41 AM	R17244
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	3/7/2014 3:44:28 AM	R17173
Bromide	0.13	0.10		mg/L	1	3/7/2014 3:32:04 AM	R17173
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	3/7/2014 3:32:04 AM	R17173
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	3/7/2014 3:32:04 AM	R17173
Sulfate	870	10		mg/L	20	3/7/2014 3:44:28 AM	R17173
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	110	5.0		mg/L	5	3/14/2014 2:56:33 PM	R17335
Magnesium	18	1.0		mg/L	1	3/13/2014 1:03:07 PM	R17289
Potassium	22	1.0		mg/L	1	3/13/2014 1:03:07 PM	R17289
Sodium	2300	50		mg/L	50	3/14/2014 2:58:33 PM	R17335

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** Trip Blank**Project:** Q1-2014 Groundwater Sampling**Collection Date:****Lab ID:** 1403217-005**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Toluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Naphthalene	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Acetone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromoform	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromomethane	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Butanone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Carbon disulfide	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chloroethane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chloroform	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chloromethane	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Dibromomethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** Trip Blank**Project:** Q1-2014 Groundwater Sampling**Collection Date:****Lab ID:** 1403217-005**Matrix:** AQUEOUS**Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Hexanone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Styrene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 5:43:26 AM	R17213
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213
Surr: Dibromofluoromethane	107	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213
Surr: Toluene-d8	100	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		



12065 Lebanon Rd.
Mt. Juliet, TN 37122
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Fax (615) 758-5859
Tax I.D. 62-0814289
Est. 1970

REPORT OF ANALYSIS

March 11, 2014

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

Date Received : March 07, 2014
Description :
Sample ID : 1403217-001H EF-5
Collected By :
Collection Date : 03/05/14 14:25

ESC Sample # : 1686665-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1000	20.	mg/l	410.4	03/11/14	2

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/11/14 17:06 Printed: 03/11/14 17:06



L.A.B S.C.I.E.N.C.E.S

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 11, 2014

Date Received : March 07, 2014
Description :
Sample ID : 1403217-002H EP-4
Collected By :
Collection Date : 03/05/14 14:50

ESC Sample # : L686665-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1000	10.	mg/l	410.4	03/10/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/11/14 17:06 Printed: 03/11/14 17:06



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Est. 1970

REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 11, 2014

Date Received : March 07, 2014
Description :
Sample ID : 1403217-002H EP-3
Collected By :
Collection Date : 03/05/14 15:30

ESC Sample # : L686665-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	990	10.	mg/l	410.4	03/10/14	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/11/14 17:06 Printed: 03/11/14 17:06



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L686665

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

March 11, 2014

Analyte		Result	Laboratory Blank		Limit	Batch	Date Analyzed
			Units	% Rec			
COD		< 10	mg/l			WG709939	03/10/14 14:19
COD		< 10	mg/l			WG710160	03/11/14 13:22

Analyte		Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD		mg/l	3200	3200	0.0	5	L686660-01	WG709939
COD		mg/l	180000	180000	0.0	5	L686678-01	WG710160
COD		mg/l	990000	990000	0.0	5	L686678-02	WG710160
COD		mg/l	1000	1000	0.0	5	L686672-02	WG710160
COD		mg/l	1000	1000	0.0	5	L686665-01	WG710160
COD		mg/l	600	600	0.0	5	L686672-03	WG710160

Analyte		Units	Laboratory Control Sample		% Rec	Limit	Batch
			Known Val	Result			
COD		mg/l	183	180	104	90-110	WG709939
COD		mg/l	183	175	95.6	90-110	WG710160

Analyte		Units	Result	Ref	% Rec	Limit	RPD	Limit	Batch
COD		mg/l	180	180	104	90-110	0.0	5	WG709939
COD		mg/l	178	175	97.0	90-110	1.70	5	WG710160

Analyte		Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD		mg/l	1830	1000	400	100	90-110	L686672-02	WG710160

Analyte		Units	MSD	Ref	% Rec	Limit	RPD	Limit	Ref Samp	Batch
COD		mg/l	1820	1830	102	90-110	0.549	5	L686672-02	WG710160

Batch number / Run number / Sample number cross reference

WG709939: R2892040: L686665-02 03
WG710160: R2892133: L686665-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R17148	RunNo:	17148					
Prep Date:	2/5/2014	Analysis Date:	3/6/2014	SeqNo:	493068	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								
Cromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	0.010								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R17148	RunNo:	17148					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493069	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.8	85	115			
Cromium	0.50	0.0060	0.5000	0	99.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Magnesium	50	1.0	50.00	0	99.0	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Potassium	49	1.0	50.00	0	98.0	85	115			
Sodium	0.52	0.010	0.5000	0	104	85	115			

Sample ID	1403198-010BMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17148	RunNo:	17148					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493144	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.72	0.0020	0.5000	0.1992	104	70	130			
Cadmium	0.48	0.0020	0.5000	0	96.5	70	130			
Cromium	0.51	0.0060	0.5000	0.01360	99.7	70	130			
Copper	0.43	0.0060	0.5000	0	85.6	70	130			
Manganese	0.88	0.0020	0.5000	0.3795	99.9	70	130			
Sodium	0.54	0.010	0.5000	0.01880	104	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Fall Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
 Project: Q1-2014 Groundwater Sampling

Sample ID	1403198-010BMSD	SampType: MSD	TestCode: EPA Method 200.7: Dissolved Metals							
Client ID:	BatchQC	Batch ID: R17148	RunNo: 17148							
Rep Date:	Analysis Date: 3/6/2014		SeqNo: 493145		Units: mg/L					
Nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.72	0.0020	0.5000	0.1992	103	70	130	0.694	20	
Lead	0.48	0.0020	0.5000	0	96.3	70	130	0.216	20	
Cadmium	0.51	0.0060	0.5000	0.01360	99.2	70	130	0.509	20	
Chromium	0.43	0.0060	0.5000	0	85.2	70	130	0.403	20	
Copper	0.88	0.0020	0.5000	0.3795	99.9	70	130	0.0159	20	
Manganese	0.53	0.010	0.5000	0.01880	103	70	130	1.09	20	

Sample ID	1403198-010BMS	SampType: MS	TestCode: EPA Method 200.7: Dissolved Metals							
Client ID:	BatchQC	Batch ID: R17148	RunNo: 17148							
Rep Date:	Analysis Date: 3/6/2014		SeqNo: 493147		Units: mg/L					
Nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	3.3	0.10	2.500	0.6302	107	70	130			

Sample ID	1403198-010BMSD	SampType: MSD	TestCode: EPA Method 200.7: Dissolved Metals							
Client ID:	BatchQC	Batch ID: R17148	RunNo: 17148							
Rep Date:	Analysis Date: 3/6/2014		SeqNo: 493148		Units: mg/L					
Nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	3.4	0.10	2.500	0.6302	111	70	130	3.05	20	

Sample ID	1403217-001DMS	SampType: MS	TestCode: EPA Method 200.7: Dissolved Metals							
Client ID:	EP-5	Batch ID: R17148	RunNo: 17148							
Rep Date:	Analysis Date: 3/6/2014		SeqNo: 493157		Units: mg/L					
Nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	2.7	0.010	2.500	0.1033	104	70	130			
Lead	2.4	0.010	2.500	0	94.6	70	130			
Cadmium	2.5	0.030	2.500	0.01125	99.8	70	130			
Chromium	2.6	0.030	2.500	0	104	70	130			
Copper	3.1	0.10	2.500	0.4648	106	70	130			
Manganese	340	5.0	250.0	99.04	97.8	70	130			
Iron	3.2	0.010	2.500	0.5538	105	70	130			
Potassium	440	5.0	250.0	175.0	104	70	130			
Sodium	2.6	0.050	2.500	0.01055	102	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Fall Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	1403217-001DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	EP-5	Batch ID:	R17148	RunNo:	17148					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493158	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.7	0.010	2.500	0.1033	106	70	130	1.48	20	
Cadmium	2.4	0.010	2.500	0	97.0	70	130	2.57	20	
Chromium	2.5	0.030	2.500	0.01125	99.3	70	130	0.470	20	
Copper	2.6	0.030	2.500	0	105	70	130	1.16	20	
Lead	3.2	0.10	2.500	0.4648	108	70	130	1.07	20	
Magnesium	350	5.0	250.0	99.04	99.3	70	130	1.05	20	
Manganese	3.2	0.010	2.500	0.5538	107	70	130	1.44	20	
Potassium	440	5.0	250.0	175.0	106	70	130	0.861	20	
Selenium	2.6	0.050	2.500	0.01055	105	70	130	2.52	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R17186	RunNo:	17186					
Prep Date:	2/5/2014	Analysis Date:	3/7/2014	SeqNo:	494522	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	1.0								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R17186	RunNo:	17186					
Prep Date:		Analysis Date:	3/7/2014	SeqNo:	494523	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	49	1.0	50.00	0	98.3	85	115			

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496101	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.10	0.0050	0.1000	0	101	85	115			

Sample ID	1403281-001BMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496103	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.10	0.0050	0.1000	0	103	70	130			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
 Project: Q1-2014 Groundwater Sampling

Sample ID	1403281-001BMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496104	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ver	0.10	0.0050	0.1000	0	104	70	130	1.49	20	

Sample ID	1403217-001DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	EP-5	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496159	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ver	0.39	0.025	0.5000	0	77.7	70	130			

Sample ID	1403217-001DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	EP-5	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496160	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ver	0.42	0.025	0.5000	0	83.3	70	130	6.95	20	

Sample ID	1403198-010BMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496167	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ver	0.095	0.0050	0.1000	0	95.0	70	130			

Sample ID	1403198-010BMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496171	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ver	0.096	0.0050	0.1000	0	95.6	70	130	0.577	20	

Sample ID	1403273-022AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496186	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ver	0.094	0.0050	0.1000	0	93.5	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	1403273-022AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17234	RunNo:	17234					
Prep Date:		Analysis Date:	3/11/2014	SeqNo:	496187	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ver	0.097	0.0050	0.1000	0	96.7	70	130	3.28	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R17289	RunNo:	17289					
Prep Date:		Analysis Date:	3/13/2014	SeqNo:	498058	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R17289	RunNo:	17289					
Prep Date:		Analysis Date:	3/13/2014	SeqNo:	498059	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	51	1.0	50.00	0	103	85	115			
Potassium	50	1.0	50.00	0	100	85	115			

Sample ID	1403477-001BMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17289	RunNo:	17289					
Prep Date:		Analysis Date:	3/13/2014	SeqNo:	498102	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	59	1.0	50.00	7.323	103	70	130			

Sample ID	1403477-001BMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R17289	RunNo:	17289					
Prep Date:		Analysis Date:	3/13/2014	SeqNo:	498103	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	59	1.0	50.00	7.323	104	70	130	0.629	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R17335	RunNo:	17335					
Prep Date:		Analysis Date:	3/14/2014	SeqNo:	499202	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Sodium	ND	1.0								

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Ball Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Dissolved Metals						
Client ID:	LCSW	Batch ID:	R17335	RunNo:	17335						
Prep Date:		Analysis Date:	3/14/2014	SeqNo:	499203	Units:	mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		51	1.0	50.00	0	101	85	115			
Sodium		50	1.0	50.00	0	99.5	85	115			

Sample ID	1403477-001BMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals						
Client ID:	BatchQC	Batch ID:	R17335	RunNo:	17335						
Prep Date:		Analysis Date:	3/14/2014	SeqNo:	499268	Units:	mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		310	5.0	250.0	56.32	103	70	130			

Sample ID	1403477-001BMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals						
Client ID:	BatchQC	Batch ID:	R17335	RunNo:	17335						
Prep Date:		Analysis Date:	3/14/2014	SeqNo:	499269	Units:	mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		330	5.0	250.0	56.32	110	70	130	5.54	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	MB-12082	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	12082	RunNo:	17220					
Prep Date:	3/7/2014	Analysis Date:	3/10/2014	SeqNo:	495500	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.0020								
Lead	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Nickel	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-12082	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	12082	RunNo:	17220					
Prep Date:	3/7/2014	Analysis Date:	3/10/2014	SeqNo:	495501	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.50	0.0020	0.5000	0	101	85	115			
Lead	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.50	0.020	0.5000	0	99.6	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Nickel	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID	1403198-006GMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	12082	RunNo:	17256					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	496982	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.71	0.010	0.5000	0.1793	106	70	130			
Lead	0.54	0.010	0.5000	0	109	70	130			
Chromium	0.50	0.030	0.5000	0.01995	96.4	70	130			
Copper	0.54	0.030	0.5000	0	108	70	130			
Iron	0.82	0.10	0.5000	0.2555	113	70	130			

Sample ID	1403198-006GMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	12082	RunNo:	17256					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	496983	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.70	0.010	0.5000	0.1793	105	70	130	0.766	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Fall Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	1403198-006GMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	12082	RunNo:	17256					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	496983	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.54	0.010	0.5000	0	108	70	130	0.990	20	
Chromium	0.50	0.030	0.5000	0.01995	95.7	70	130	0.700	20	
Copper	0.54	0.030	0.5000	0	107	70	130	0.928	20	
Lead	0.82	0.10	0.5000	0.2555	114	70	130	0.225	20	

Sample ID	1403217-001EMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	EP-5	Batch ID:	12082	RunNo:	17256					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	496996	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.65	0.010	0.5000	0.1154	107	70	130			
Chromium	0.54	0.010	0.5000	0	107	70	130			
Chromium	0.51	0.030	0.5000	0	102	70	130			
Copper	0.53	0.030	0.5000	0	106	70	130			
Lead	1.1	0.10	0.5000	0.6030	95.8	70	130			
Manganese	1.0	0.010	0.5000	0.5504	98.9	70	130			
Vanadium	0.13	0.025	0.1000	0	131	70	130			S

Sample ID	1403217-001EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	EP-5	Batch ID:	12082	RunNo:	17256					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	496997	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.64	0.010	0.5000	0.1154	106	70	130	0.796	20	
Chromium	0.53	0.010	0.5000	0	107	70	130	0.299	20	
Chromium	0.52	0.030	0.5000	0	103	70	130	1.09	20	
Copper	0.52	0.030	0.5000	0	103	70	130	2.90	20	
Lead	1.1	0.10	0.5000	0.6030	96.5	70	130	0.328	20	
Manganese	1.0	0.010	0.5000	0.5504	90.9	70	130	3.90	20	
Vanadium	0.13	0.025	0.1000	0	126	70	130	4.47	20	

Sample ID	1403198-006GMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	12082	RunNo:	17256					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	497046	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.51	0.050	0.5000	0.02245	96.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2.

RL Reporting Detection Limit

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	1403198-006GMSD	SampType: MSD	TestCode: EPA Method 200.7: Total Metals							
Client ID:	BatchQC	Batch ID: 12082	RunNo: 17256							
Prep Date:	3/7/2014	Analysis Date: 3/12/2014	SeqNo: 497047	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
As	0.50	0.050	0.5000	0.02245	96.0	70	130	0.754	20	

Sample ID	1403217-001EMS	SampType: MS	TestCode: EPA Method 200.7: Total Metals							
Client ID:	EP-5	Batch ID: 12082	RunNo: 17256							
Prep Date:	3/7/2014	Analysis Date: 3/12/2014	SeqNo: 497055	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
As	0.52	0.050	0.5000	0.02170	99.4	70	130			

Sample ID	1403217-001EMSD	SampType: MSD	TestCode: EPA Method 200.7: Total Metals							
Client ID:	EP-5	Batch ID: 12082	RunNo: 17256							
Prep Date:	3/7/2014	Analysis Date: 3/12/2014	SeqNo: 497056 Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
As	0.52	0.050	0.5000	0.02170	100	70	130	0.702	20	

Sample ID	1403198-006GMS	SampType: MS	TestCode: EPA Method 200.7: Total Metals							
Client ID:	BatchQC	Batch ID: 12082	RunNo: 17408							
Prep Date:	3/7/2014	Analysis Date: 3/18/2014	SeqNo: 501384 Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
As	0.12	0.025	0.1000	0	125	70	130			

Sample ID	1403198-008GMSD	SampType: MSD	TestCode: EPA Method 200.7: Total Metals							
Client ID:	BatchQC	Batch ID: 12082	RunNo: 17408							
Prep Date:	3/7/2014	Analysis Date: 3/18/2014	SeqNo: 501392 Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mer	0.12	0.025	0.1000	0	120	70	130	4.04	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Fall Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
 Project: Q1-2014 Groundwater Sampling

Sample ID	LCS		SampType: LCS	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	LCSW		Batch ID: R17281	RunNo: 17281						
Prep Date:			Analysis Date: 3/13/2014	SeqNo: 497670		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
senic	0.025	0.0010	0.02500	0	98.5	85	115			
ad	0.025	0.0010	0.02500	0	98.0	85	115			
elenium	0.024	0.0010	0.02500	0	96.2	85	115			
anium	0.025	0.0010	0.02500	0	98.4	85	115			

Sample ID	MB		SampType: MBLK	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	PBW		Batch ID: R17281	RunNo: 17281						
Prep Date:			Analysis Date: 3/13/2014	SeqNo: 497671		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
senic	ND	0.0010								
ad	ND	0.0010								
elenium	ND	0.0010								
anium	ND	0.0010								

Sample ID	1403055-004AMS		SampType: MS	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	BatchQC		Batch ID: R17281	RunNo: 17281						
Prep Date:			Analysis Date: 3/13/2014	SeqNo: 497989		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
senic	0.12	0.0050	0.1250	0	96.4	70	130			
elenium	0.12	0.0050	0.1250	0	92.5	70	130			

Sample ID	1403055-004AMSD		SampType: MSD	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	BatchQC		Batch ID: R17281	RunNo: 17281						
Prep Date:			Analysis Date: 3/13/2014	SeqNo: 497990		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
senic	0.12	0.0050	0.1250	0	94.6	70	130	1.85	20	
elenium	0.11	0.0050	0.1250	0	90.6	70	130	2.08	20	

Sample ID	1403273-002AMS		SampType: MS	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	BatchQC		Batch ID: R17281	RunNo: 17281						
Prep Date:			Analysis Date: 3/13/2014	SeqNo: 498008		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ad	0.023	0.0010	0.02500	.00004399	93.7	70	130			
ranium	0.039	0.0010	0.02500	0.01814	83.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Call Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	LCS		SampType: LCS	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	LCSW		Batch ID: R17281	RunNo: 17281						
Rep Date:			Analysis Date: 3/13/2014	SeqNo: 498009		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.024	0.0010	0.02500	0	95.1	85	115			
Lead	0.025	0.0010	0.02500	0	98.1	85	115			
Mercury	0.024	0.0010	0.02500	0	94.7	85	115			
Vanadium	0.024	0.0010	0.02500	0	96.4	85	115			

Sample ID	MB		SampType: MBLK	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	PBW		Batch ID: R17281	RunNo: 17281						
Rep Date:			Analysis Date: 3/13/2014	SeqNo: 498010		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0010								
Lead	ND	0.0010								
Mercury	ND	0.0010								
Vanadium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

IC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

sample ID 1403215-001BLLMS		SampType: MSLL		TestCode: 200.8 ICPMS Metals:Total						
lient ID: BatchQC		Batch ID: 12082		RunNo: 17259						
rep Date: 3/7/2014		Analysis Date: 3/12/2014		SeqNo: 497137			Units: mg/L			
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Asenic	0.032	0.0010	0.02500	0.007774	98.1	70	130			

Sample ID	1403215-001BLLMS		SampType: MSDLL	TestCode: 200.8 ICPMS Metals:Total						
Client ID:	BatchQC		Batch ID: 12082	RunNo: 17259						
Rep Date:	3/7/2014		Analysis Date: 3/12/2014	SeqNo: 497138		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Asenic	0.033	0.0010	0.02500	0.007774	99.7	70	130	1.23	20	

sample ID	LLLCS-12082	SampType:	LCSLL	TestCode:	200.8 ICPMS Metals:Total					
lient ID:	BatchQC	Batch ID:	12082	RunNo:	17259					
rep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	497154	Units:	mg/L			
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ad	0.025	0.0010	0.02500	0	99.7	85	115			B
anium	0.024	0.0010	0.02500	0	97.5	85	115			B

Sample ID	LLLCS-12082	SampType:	LCSLL	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	BatchQC	Batch ID:	12082	RunNo:	17259					
Rep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	497155	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Asenic	0.024	0.0010	0.02500	0	94.3	85	115			
Antimony	0.022	0.0010	0.02500	0	89.1	85	115			

Sample ID	MB-12082	SampType: MBLK	TestCode: 200.8 ICPMS Metals:Total							
Client ID:	PBW	Batch ID: 12082	RunNo: 17259							
Prep Date:	3/7/2014	Analysis Date: 3/12/2014	SeqNo: 497158	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Antimony	ND	0.0010								

Sample ID	MB-12082	SampType: MBLK	TestCode: 200.8 ICPMS Metals:Total							
Client ID:	PBW	Batch ID: 12082	RunNo: 17259							
Prep Date:	3/7/2014	Analysis Date: 3/12/2014	SeqNo: 497159	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Asenic	ND	0.0010								
Antimony	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	MB-12102	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	12102	RunNo:	17228					
Prep Date:	3/10/2014	Analysis Date:	3/11/2014	SeqNo:	495950	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-12102	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	12102	RunNo:	17228					
Prep Date:	3/10/2014	Analysis Date:	3/11/2014	SeqNo:	495951	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

Sample ID	1403273-001BMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	12102	RunNo:	17228					
Prep Date:	3/10/2014	Analysis Date:	3/11/2014	SeqNo:	495962	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0.0001023	100	75	125			

Sample ID	1403273-001BMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	12102	RunNo:	17228					
Prep Date:	3/10/2014	Analysis Date:	3/11/2014	SeqNo:	495963	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0.0001023	101	75	125	0.386	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R17173	RunNo: 17173								
Rep Date:	Analysis Date: 3/6/2014	SeqNo: 494059			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Ammonia, Nitrite (As N)	ND	0.10								
Ammonia	ND	0.10								
Ammonia, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Phosphate	ND	0.50								

sample ID	LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions					
lient ID:	LCSW	Batch ID: R17173			RunNo: 17173					
rep Date:	Analysis Date: 3/6/2014			SeqNo: 494060		Units: mg/L				
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oride	0.47	0.10	0.5000	0	93.7	90	110			
rogen, Nitrite (As N)	0.94	0.10	1.000	0	94.3	90	110			
imide	2.4	0.10	2.500	0	96.3	90	110			
rogen, Nitrate (As N)	2.4	0.10	2.500	0	97.7	90	110			
osphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.3	90	110			
ifate	9.5	0.50	10.00	0	94.6	90	110			

sample ID	1403164-002AMS	SampType: MS	TestCode: EPA Method 300.0: Anions							
lient ID:	BatchQC	Batch ID: R17173	RunNo: 17173							
rep Date:	Analysis Date: 3/6/2014		SeqNo: 494064		Units: mg/L					
nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	0.88	0.10	0.5000	0.4850	78.5	76.4	109			
rogen, Nitrite (As N)	0.80	0.10	1.000	0	80.4	85.2	109			S
amide	2.4	0.10	2.500	0.09010	91.5	85.9	111			
rogen, Nitrate (As N)	8.2	0.10	2.500	5.549	104	93.8	111			
osphorus, Orthophosphate (As P	6.4	0.50	5.000	1.685	93.6	81.1	108			

sample ID	1403164-002AMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions							
lient ID:	BatchQC	Batch ID: R17173	RunNo: 17173							
rep Date:	Analysis Date: 3/6/2014		SeqNo: 494065		Units: mg/L					
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	0.90	0.10	0.5000	0.4850	82.3	76.4	109	2.13	20	
rogen, Nitrite (As N)	0.80	0.10	1.000	0	79.7	85.2	109	0.825	20	S
omide	2.4	0.10	2.500	0.09010	90.7	85.9	111	0.916	20	
rogen, Nitrate (As N)	8.1	0.10	2.500	5.549	103	93.8	111	0.221	20	
osphorus, Orthophosphate (As P	6.4	0.50	5.000	1.685	93.5	81.1	108	0.0849	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Ball Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	1403173-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
lient ID:	BatchQC	Batch ID:	R17173	RunNo:	17173					
rep Date:	Analysis Date: 3/6/2014			SeqNo:	494078	Units: mg/L				
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	0.93	0.10	0.5000	0.4828	90.2	76.4	109			
rogen, Nitrite (As N)	0.92	0.10	1.000	0	91.8	85.2	109			
amide	2.4	0.10	2.500	0	96.2	85.9	111			
rogen, Nitrate (As N)	2.4	0.10	2.500	0	95.5	93.8	111			
osphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.1	81.1	108			

sample ID	1403173-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
lient ID:	BatchQC	Batch ID:	R17173	RunNo:	17173					
rep Date:	Analysis Date: 3/6/2014			SeqNo:	494079	Units: mg/L				
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	0.94	0.10	0.5000	0.4828	91.0	76.4	109	0.438	20	
rogen, Nitrite (As N)	0.92	0.10	1.000	0	92.2	85.2	109	0.522	20	
amide	2.4	0.10	2.500	0	96.0	85.9	111	0.208	20	
rogen, Nitrate (As N)	2.4	0.10	2.500	0	96.2	93.8	111	0.722	20	
osphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.9	81.1	108	0.830	20	

sample ID	MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions						
lient ID:	PBW	Batch ID: R17173		RunNo: 17173						
rep Date:		Analysis Date: 3/6/2014		SeqNo: 494113		Units: mg/L				
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	ND	0.10								
rogen, Nitrite (As N)	ND	0.10								
amide	ND	0.10								
rogen, Nitrate (As N)	ND	0.10								
osphorus, Orthophosphate (As P	ND	0.50								
lfate	ND	0.50								

Sample ID	LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID: R17173			RunNo: 17173					
Rep Date:		Analysis Date: 3/6/2014			SeqNo: 494114		Units: mg/L			
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iodide	0.51	0.10	0.5000	0	101	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.9	90	110			
Amide	2.4	0.10	2.500	0	97.1	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.7	90	110			
Phosphorus, Orthophosphate (As P)	4.9	0.50	5.000	0	97.4	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	1403244-001BMS	SampType: MS	TestCode: EPA Method 300.0: Anions							
Client ID:	BatchQC	Batch ID: R17173	RunNo: 17173							
Prep Date:	Analysis Date: 3/6/2014		SeqNo: 494120		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.1	0.10	0.5000	1.696	85.4	76.4	109			
Nitrogen, Nitrite (As N)	0.90	0.10	1.000	0	90.5	85.2	109			
Amide	2.7	0.10	2.500	0.3702	93.1	85.9	111			
Nitrogen, Nitrate (As N)	4.3	0.10	2.500	1.833	99.0	93.8	111			
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	91.0	81.1	108			

Sample ID 1403244-001BMSD		SampType: MSD			TestCode: EPA Method 300.0: Anions					
Client ID: BatchQC		Batch ID: R17173			RunNo: 17173					
Prep Date:		Analysis Date: 3/6/2014			SeqNo: 494121		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
fluoride	2.1	0.10	0.5000	1.696	84.2	76.4	109	0.283	20	
nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	90.6	85.2	109	0.133	20	
ammonide	2.7	0.10	2.500	0.3702	92.8	85.9	111	0.315	20	
nitrogen, Nitrate (As N)	4.3	0.10	2.500	1.833	99.3	93.8	111	0.188	20	
phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	94.4	81.1	108	3.63	20	

Sample ID	1403258-001BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R17173	RunNo:	17173					
Prep Date:	Analysis Date: 3/6/2014			SeqNo:	494124	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
fluoride	0.95	0.10	0.5000	0.4825	93.0	76.4	109			
nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	90.9	85.2	109			
ammonide	2.6	0.10	2.500	0.2497	93.0	85.9	111			
nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1388	96.3	93.8	111			
phosphorus, Orthophosphate (As P)	4.7	0.50	5.000	0	94.8	81.1	108			

Sample ID 1403258-001BMSD		SampType: MSD			TestCode: EPA Method 300.0: Anions					
Client ID: BatchQC		Batch ID: R17173			RunNo: 17173					
Prep Date:		Analysis Date: 3/6/2014			SeqNo: 494125		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
luoride	0.96	0.10	0.5000	0.4825	95.1	76.4	109	1.10	20	
litrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.8	85.2	109	0.931	20	
lromide	2.6	0.10	2.500	0.2497	94.2	85.9	111	1.13	20	
litrogen, Nitrate (As N)	2.6	0.10	2.500	0.1388	97.8	93.8	111	1.45	20	
hosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	81.1	108	2.04	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Call Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
Client ID:	PBW	Batch ID: R17244		RunNo: 17244							
Rep Date:		Analysis Date: 3/11/2014		SeqNo: 496579		Units: mg/L					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	0.50								

sample ID	LCS-b	SampType: LCS			TestCode: EPA Method 300.0: Anions						
lient ID:	LCSW	Batch ID: R17244			RunNo: 17244						
rep Date:		Analysis Date: 3/11/2014			SeqNo: 496581		Units: mg/L				
nalyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride		4.7	0.50	5.000	0	93.6	90	110			

sample ID	MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions							
lient ID:	PBW	Batch ID: R17244		RunNo: 17244							
rep Date:		Analysis Date: 3/11/2014		SeqNo: 496606		Units: mg/L					
nalyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride		ND	0.50								

sample ID	LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions							
lient ID:	LCSW	Batch ID: R17244		RunNo: 17244							
rep Date:		Analysis Date: 3/11/2014		SeqNo: 496607		Units: mg/L					
nalyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride		4.8	0.50	5.000	0	95.0	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID: 5mL rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R17213	RunNo: 17213								
Prep Date:	Analysis Date: 3/10/2014	SeqNo: 495288 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								
ethyl 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								
phthalene	ND	2.0								
1-methylnaphthalene	ND	4.0								
2-methylnaphthalene	ND	4.0								
acetone	ND	10								
monobenzene	ND	1.0								
monodichloromethane	ND	1.0								
monochloroform	ND	1.0								
monomethane	ND	3.0								
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								
chlorotoluene	ND	1.0								
chlorotoluene	ND	1.0								
1,1,2-DCE	ND	1.0								
1,1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
monochloromethane	ND	1.0								
monomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
chlorodifluoromethane	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								
1,4-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

01-Apr-14

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

ient: Western Refining Southwest, Gallup
 oject: Q1-2014 Groundwater Sampling

sample ID	100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES							
lient ID:	LCSW	Batch ID: R17213	RunNo: 17213							
rep Date:	Analysis Date: 3/10/2014		SeqNo: 495290		Units: µg/L					
analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-Dichloroethene	20	1.0	20.00	0	100	90	143			
chloroethene (TCE)	17	1.0	20.00	0	86.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.4	70	130			

sample ID	1403303-003a.ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
lient ID:	BatchQC	Batch ID:	R17213	RunNo:	17213					
rep Date:	Analysis Date:	3/10/2014	SeqNo:	495313	Units: µg/L					
nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
nzene	20	1.0	20.00	0	101	70	130			
luene	18	1.0	20.00	0	88.4	67.5	123			
lorobenzene	17	1.0	20.00	0	85.0	70	130			
-Dichloroethene	19	1.0	20.00	0	94.4	81.9	134			
chloroethene (TCE)	18	1.0	20.00	0	87.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.9	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID	1403303-003a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	BatchQC	Batch ID: R17213	RunNo: 17213							
Prep Date:	Analysis Date: 3/10/2014		SeqNo: 495314		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130	10.5	20	
Toluene	19	1.0	20.00	0	95.0	67.5	123	7.22	20	
Chlorobenzene	19	1.0	20.00	0	94.5	70	130	10.6	20	
1,1-Dichloroethene	20	1.0	20.00	0	101	81.9	134	7.20	20	
Trichloroethene (TCE)	18	1.0	20.00	0	92.2	70	130	5.16	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130	0	0	
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130	0	0	
Surr: Toluene-d8	10		10.00		99.8	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID: MB-12139		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW		Batch ID: 12139		RunNo: 17268						
Prep Date: 3/12/2014		Analysis Date: 3/12/2014		SeqNo: 497414		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benaphthene	ND	10								
Benaphthylene	ND	10								
Biline	ND	10								
Bitracene	ND	10								
Tobenzene	ND	10								
Ben(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	ND	20								
Benzy alcohol	ND	10								
1,2-dichloroethoxy)methane	ND	10								
1,2-dichloroethyl)ether	ND	10								
1,2-dichloroisopropyl)ether	ND	10								
1,2-ethylhexyl)phthalate	ND	10								
Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
Chloro-3-methylphenol	ND	10								
Chloroaniline	ND	10								
Chloronaphthalene	ND	10								
Chlorophenol	ND	10								
Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
1-n-butyl phthalate	ND	10								
1-n-octyl phthalate	ND	10								
1-benz(a,h)anthracene	ND	10								
1-benzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
1,3'-Dichlorobenzidine	ND	10								
1-ethyl phthalate	ND	10								
1-methyl phthalate	ND	10								
1,4-Dichlorophenol	ND	20								
1,4-Dimethylphenol	ND	10								
1,6-Dinitro-2-methylphenol	ND	20								
1,4-Dinitrophenol	ND	20								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
 Project: Q1-2014 Groundwater Sampling

Sample ID: MB-12139 SampType: MBLK TestCode: EPA Method 8270C: Semivolatiles

Client ID: PBW Batch ID: 12139 RunNo: 17268

Prep Date: 3/12/2014 Analysis Date: 3/12/2014 SeqNo: 497414 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Dinitrotoluene	ND	10								
3-Dinitrotoluene	ND	10								
fluoranthene	ND	10								
fluorene	ND	10								
hexachlorobenzene	ND	10								
hexachlorobutadiene	ND	10								
hexachlorocyclopentadiene	ND	10								
hexachloroethane	ND	10								
benzo(1,2,3-cd)pyrene	ND	10								
biphenyl	ND	10								
Methylnaphthalene	ND	10								
Methylnaphthalene	ND	10								
Methylphenol	ND	10								
4-Methylphenol	ND	10								
Nitrosodi-n-propylamine	ND	10								
Nitrosodimethylamine	ND	10								
Nitrosodiphenylamine	ND	10								
naphthalene	ND	10								
Nitroaniline	ND	10								
Nitroaniline	ND	10								
Nitroaniline	ND	10								
nitrobenzene	ND	10								
Nitrophenol	ND	10								
Nitrophenol	ND	10								
pentachlorophenol	ND	20								
peranthrene	ND	10								
phenol	ND	10								
fluorene	ND	10								
pyridine	ND	10								
2,4-Trichlorobenzene	ND	10								
4,5-Trichlorophenol	ND	10								
4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		70.8	22.7		98		
Surr: Phenol-d5	100		200.0		50.6	23.4		74.9		
Surr: 2,4,6-Tribromophenol	210		200.0		104	23.3		111		
Surr: Nitrobenzene-d5	95		100.0		95.2	36.8		111		
Surr: 2-Fluorobiphenyl	87		100.0		87.3	38.3		110		
Surr: 4-Terphenyl-d14	92		100.0		91.7	52.1		116		

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

WO#: 1403217

Fall Environmental Analysis Laboratory, Inc.

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	LCS-12139		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 12139		RunNo: 17268					
Prep Date:	3/12/2014		Analysis Date: 3/12/2014		SeqNo: 497415		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benaphthene	88	10	100.0	0	88.4	48	101			
Chloro-3-methylphenol	160	10	200.0	0	82.4	47.9	109			
Chlorophenol	170	10	200.0	0	85.9	40	105			
4-Dichlorobenzene	99	10	100.0	0	98.8	40.8	94.3			S
4-Dinitrotoluene	78	10	100.0	0	77.8	28.3	131			
Nitrosodi-n-propylamine	110	10	100.0	0	107	46.2	119			
Nitrophenol	93	10	200.0	0	46.6	10.5	67.9			
o-methylchlorophenol	130	20	200.0	0	65.3	22.4	81.1			
o-nitrophenol	110	10	200.0	0	54.4	21.4	72.9			
p-nitrophenol	78	10	100.0	0	77.8	46.9	109			
2,4-Trichlorobenzene	83	10	100.0	0	83.0	43.1	98.4			
Surr: 2-Fluorophenol	140		200.0		71.0	22.7	98			
Surr: Phenol-d5	100		200.0		52.4	23.4	74.9			
Surr: 2,4,6-Tribromophenol	210		200.0		105	23.3	111			
Surr: Nitrobenzene-d5	92		100.0		91.9	36.8	111			
Surr: 2-Fluorobiphenyl	88		100.0		87.7	38.3	110			
Surr: 4-Terphenyl-d14	98		100.0		98.4	52.1	116			

Sample ID	1403354-002gms		SampType: MS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	BatchQC		Batch ID: 12139		RunNo: 17268					
Prep Date:	3/12/2014		Analysis Date: 3/12/2014		SeqNo: 497433		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benaphthene	81	10	100.0	2.960	78.5	52.5	94.5			
Chloro-3-methylphenol	170	10	200.0	0	87.0	45	103			
Chlorophenol	110	10	200.0	0	55.6	32.3	101			
4-Dichlorobenzene	68	10	100.0	0	67.5	34.5	97.5			
4-Dinitrotoluene	85	10	100.0	0	84.6	20.1	123			
Nitrosodi-n-propylamine	80	10	100.0	0	79.9	26.9	131			
Nitrophenol	68	10	200.0	0	34.2	11.6	55.4			
o-methylchlorophenol	130	20	200.0	5.380	62.2	17.6	88.9			
o-nitrophenol	62	10	200.0	0	31.0	18.4	66.5			
p-nitrophenol	72	10	100.0	0	71.9	43.1	111			
2,4-Trichlorobenzene	62	10	100.0	0	61.9	38.8	95.6			
Surr: 2-Fluorophenol	75		200.0		37.6	22.7	98			
Surr: Phenol-d5	57		200.0		28.5	23.4	74.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.5	23.3	111			
Surr: Nitrobenzene-d5	65		100.0		65.0	36.8	111			
Surr: 2-Fluorobiphenyl	73		100.0		73.3	38.3	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Call Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	1403354-002gms	SampType: MS	TestCode: EPA Method 8270C: Semivolatiles							
Client ID:	BatchQC	Batch ID: 12139	RunNo: 17268							
Rep Date:	3/12/2014	Analysis Date: 3/12/2014	SeqNo: 497433 Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	70		100.0		70.5	52.1	116			

Sample ID	1403354-002gmsd	SampType: MSD	TestCode: EPA Method 8270C: Semivolatiles							
Client ID:	BatchQC	Batch ID: 12139	RunNo: 17268							
Rep Date:	3/12/2014	Analysis Date: 3/12/2014	SeqNo: 497434 Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benaphthene	80	10	100.0	2.960	76.7	52.5	94.5	2.21	20	
Chloro-3-methylphenol	200	10	200.0	0	98.5	45	103	12.4	20	
Chlorophenol	120	10	200.0	0	59.0	32.3	101	5.92	20	
1-Dichlorobenzene	71	10	100.0	0	70.6	34.5	97.5	4.46	20	
1-Dinitrotoluene	82	10	100.0	0	81.6	20.1	123	3.66	20	
Nitrosodi-n-propylamine	83	10	100.0	0	82.8	26.9	131	3.52	20	
Nitrophenol	74	10	200.0	0	36.8	11.6	55.4	7.19	20	
o-chlorophenol	140	20	200.0	5.380	67.5	17.6	88.9	7.94	20	
Phenol	70	10	200.0	0	35.2	18.4	66.5	12.5	20	
Phenol	75	10	100.0	0	75.0	43.1	111	4.22	20	
2,4-Trichlorobenzene	71	10	100.0	0	71.1	38.8	95.6	13.9	20	
Surr: 2-Fluorophenol	85		200.0		42.7	22.7	98	0	0	
Surr: Phenol-d5	64		200.0		32.1	23.4	74.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		87.0	23.3	111	0	0	
Surr: Nitrobenzene-d5	69		100.0		69.0	36.8	111	0	0	
Surr: 2-Fluorobiphenyl	65		100.0		65.1	38.3	110	0	0	
Surr: 4-Terphenyl-d14	72		100.0		71.9	52.1	116	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Fall Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
 Project: Q1-2014 Groundwater Sampling

Sample ID	MB-12083	SampType:	MBLK	TestCode:	SM5210B: BOD					
Client ID:	PBW	Batch ID:	12083	RunNo:	17292					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	498191	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
biochemical Oxygen Demand	ND	2.0								

Sample ID	MB--12083	SampType:	MBLK	TestCode:	SM5210B: BOD					
Client ID:	PBW	Batch ID:	12083	RunNo:	17292					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	498192	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
biochemical Oxygen Demand	ND	2.0								

Sample ID	LCS-12083	SampType:	LCS	TestCode:	SM5210B: BOD					
Client ID:	LCSW	Batch ID:	12083	RunNo:	17292					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	498193	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
biochemical Oxygen Demand	230	2.0	198.0	0	114	84.6	115.4			

Sample ID	LCSD-12083	SampType:	LCSD	TestCode:	SM5210B: BOD					
Client ID:	LCSS02	Batch ID:	12083	RunNo:	17292					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	498194	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
biochemical Oxygen Demand	230	2.0	198.0	0	114	84.6	115.4	0.222	21	

Sample ID	1403186-002ADUP	SampType:	DUP	TestCode:	SM5210B: BOD					
Client ID:	BatchQC	Batch ID:	12083	RunNo:	17292					
Prep Date:	3/7/2014	Analysis Date:	3/12/2014	SeqNo:	498196	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
biochemical Oxygen Demand	320	2.0						6.91	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Ball Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

sample ID	MB-12058	SampType:	MBLK	TestCode:	SM 9223B Fecal Indicator: E. coli MPN					
lient ID:	PBW	Batch ID:	12058	RunNo:	17207					
rep Date:	3/6/2014	Analysis Date:	3/7/2014	SeqNo:	495105	Units:	CFU/100ml			
nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Coli	<1	1.000								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID	1403198-002e dup	SampType:	dup	TestCode:	SM2510B: Specific Conductance					
Client ID:	BatchQC	Batch ID:	R17167	RunNo:	17167					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493946	Units:	µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	7600	0.010						0.290	20	

Sample ID	1403235-002b dup	SampType:	dup	TestCode:	SM2510B: Specific Conductance					
Client ID:	BatchQC	Batch ID:	R17167	RunNo:	17167					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493965	Units:	µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	3100	0.010						0.290	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1403217

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	1403198-002e dup	SampType:	dup	TestCode:	SM4500-H+B: pH					
Client ID:	BatchQC	Batch ID:	R17167	RunNo:	17167					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493976	Units:	pH units			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	7.87	1.68								H

Sample ID	1403235-002b dup	SampType:	dup	TestCode:	SM4500-H+B: pH					
Client ID:	BatchQC	Batch ID:	R17167	RunNo:	17167					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493991	Units:	pH units			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	7.41	1.68								H

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1403217

RcptNo: 1

Received by/date:

AT 03/06/14

Logged By: Anne Thorne

3/6/2014 9:12:00 AM

Anne Thorne

Completed By: Anne Thorne

3/6/2014

Anne Thorne

Reviewed By:

mg

03/06/14

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 ☐
SEE REMARKS 03/06/14
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: 14
(<2 or >12 unless noted)
Adjusted? yes
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: FOR METALS ANALYSIS: ADDED 1mL HNO_3 TO -002E FOR ACCEPTABLE pH.

FOR DISSOLVED METALS ANALYSIS: POURED OFF & FILTERED FROM -004A1002 FOR COFBS & ADDED 0.4 mL HNO_3 FOR ACCEPTABLE pH. HELD IN LOG IN FOR 24 HOURS AFTER PRESERVATION.

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

1-HOURS AFTER PRESERVATION.

03/06/14 1320

☒ EDD (Type) Tolhydro format

Sample Temperature: / °C[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/6/14	9:12	H. Bay Waldorf	[Signature]	03/06/14	0912
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:	
----------	--



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

November 17, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014

OrderNo.: 1411527

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 14 sample(s) on 11/13/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-9

Project: Q4 2014

Collection Date: 11/13/2014 8:30:00 AM

Lab ID: 1411527-001

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	<1	1.000		CFU/100ml	1	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-2

Project: Q4 2014

Collection Date: 11/13/2014 8:58:00 AM

Lab ID: 1411527-002

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	>24196	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-3

Project: Q4 2014

Collection Date: 11/13/2014 9:03:00 AM

Lab ID: 1411527-003

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	408	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-4

Project: Q4 2014

Collection Date: 11/13/2014 9:05:00 AM

Lab ID: 1411527-004

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	63	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-5

Project: Q4 2014

Collection Date: 11/13/2014 9:13:00 AM

Lab ID: 1411527-005

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	<1	1.000		CFU/100ml	1	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-6

Project: Q4 2014

Collection Date: 11/13/2014 9:16:00 AM

Lab ID: 1411527-006

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	<1	1.000		CFU/100ml	1	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-7

Project: Q4 2014

Collection Date: 11/13/2014 9:31:00 AM

Lab ID: 1411527-007

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	20	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 7 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-8

Project: Q4 2014

Collection Date: 11/13/2014 9:24:00 AM

Lab ID: 1411527-008

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	10	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 8 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-11

Project: Q4 2014

Collection Date: 11/13/2014 9:34:00 AM

Lab ID: 1411527-009

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	<10	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 9 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-12A

Project: Q4 2014

Collection Date: 11/13/2014 9:42:00 AM

Lab ID: 1411527-010

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	131	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 10 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EP-12B

Project: Q4 2014

Collection Date: 11/13/2014 9:44:00 AM

Lab ID: 1411527-011

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: MRA
E. Coli	1012	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 11 of 21
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-111314

Project: Q4 2014

Collection Date: 11/13/2014 10:20:00 AM

Lab ID: 1411527-012

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Toluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Ethylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Naphthalene	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Acetone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromoform	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromomethane	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Butanone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Carbon disulfide	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chloroethane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chloroform	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chloromethane	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Dibromomethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-111314

Project: Q4 2014

Collection Date: 11/13/2014 10:20:00 AM

Lab ID: 1411527-012

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Hexanone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Methylene Chloride	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Styrene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Vinyl chloride	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Xylenes, Total	ND	1.5		µg/L	1	11/14/2014 10:54:51 AM	R22565
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565
Surr: 4-Bromofluorobenzene	91.1	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565
Surr: Dibromofluoromethane	107	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565
Surr: Toluene-d8	103	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-111314

Project: Q4 2014

Collection Date: 11/13/2014 10:16:00 AM

Lab ID: 1411527-013

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Benzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Toluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Ethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Naphthalene	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Acetone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromoform	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromomethane	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Butanone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Carbon disulfide	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chloroethane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chloroform	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chloromethane	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Dibromomethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-111314

Project: Q4 2014

Collection Date: 11/13/2014 10:16:00 AM

Lab ID: 1411527-013

Matrix: AQUEOUS

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Hexanone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Methylene Chloride	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Styrene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Vinyl chloride	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Xylenes, Total	ND	1.5		µg/L	1	11/14/2014 12:24:28 PM	R22565
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565
Surr: Dibromofluoromethane	92.2	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565
Surr: Toluene-d8	90.2	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411527

Date Reported: 11/17/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TB-401

Project: Q4 2014

Collection Date:

Lab ID: 1411527-014

Matrix: TRIP BLANK

Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Toluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Ethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Naphthalene	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Acetone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromoform	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromomethane	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Butanone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Carbon disulfide	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chloroethane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chloroform	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chloromethane	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Dibromomethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Hexanone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Methylene Chloride	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Styrene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Vinyl chloride	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Xylenes, Total	ND	1.5		µg/L	1	11/14/2014 12:54:21 PM	R22565
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565
Surr: Dibromofluoromethane	98.2	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565
Surr: Toluene-d8	94.0	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411527

17-Nov-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID	b3	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R22565	RunNo:	22565					
Prep Date:		Analysis Date:	11/14/2014	SeqNo:	665381	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411527

17-Nov-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R22565			RunNo: 22565						
Prep Date:	Analysis Date: 11/14/2014			SeqNo: 665381		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.3	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R22565			RunNo: 22565						
Prep Date:	Analysis Date: 11/14/2014			SeqNo: 665383		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	20	1.0	20.00	0	102	80	120			
Chlorobenzene	20	1.0	20.00	0	98.2	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411527

17-Nov-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R22565			RunNo: 22565						
Prep Date:	Analysis Date: 11/14/2014			SeqNo: 665383		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	15	1.0	20.00	0	75.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.6	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID 1411527-012a ms	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: EB-111314	Batch ID: R22565			RunNo: 22565						
Prep Date:	Analysis Date: 11/14/2014			SeqNo: 665390		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0.1700	77.6	70	130			
Toluene	16	1.0	20.00	0.3620	79.6	70	130			
Chlorobenzene	15	1.0	20.00	0	75.9	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	85.3	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	80.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.2	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID 1411527-012a msd	SampType: MSD			TestCode: EPA Method 8260B: VOLATILES						
Client ID: EB-111314	Batch ID: R22565			RunNo: 22565						
Prep Date:	Analysis Date: 11/14/2014			SeqNo: 665391		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0.1700	88.0	70	130	12.5	20	
Toluene	19	1.0	20.00	0.3620	91.6	70	130	13.7	20	
Chlorobenzene	16	1.0	20.00	0	81.9	70	130	7.57	20	
1,1-Dichloroethene	18	1.0	20.00	0	88.6	70	130	3.81	20	
Trichloroethene (TCE)	18	1.0	20.00	0	89.2	70	130	10.3	20	
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.5		10.00		95.0	70	130	0	0	
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.0	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 O RSD is greater than RSDlimit
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 P Sample pH greater than 2.
 RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411527

17-Nov-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID	MB-16383	SampType:	MBLK	TestCode:	SM 9223B	Fecal Indicator:	E. coli	MPN		
Client ID:	PBW	Batch ID:	16383	RunNo:	22577					
Prep Date:	11/13/2014	Analysis Date:	11/14/2014	SeqNo:	665666	Units:	CFU/100ml			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1411527

RcptNo: 1

Received by/date:		11/13/14
Logged By:	Ashley Gallegos	11/13/2014 2:48:00 PM
Completed By:	Ashley Gallegos	11/13/2014 2:55:59 PM
Reviewed By:		11/13/14 @ 1512

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

- 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:			

- Additional remarks:

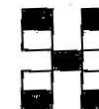
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company
 GALLUP REFINERY
 Mailing Address:
 2 Giant Crossing Road, Gallup, NM 87301
 Phone #: 505-722-3833
 email or Fax#: 505-863-0930
 QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)
 Accreditation:
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____
 Project Name:
 Q4 2014
 Project #:
 Evap Pond Study - ~~FB~~ E-Coli
 Project Manager:
 C. JOHNSON (cheryl.johnson@wnr.com)
 Sampler:
 On Ice: ☒ Yes ☐ No
 Sample Temperature: 1.0



**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.	E-Coli	Air Bubbles (Y or N)
11-13-14	830		EP-9	1		-001	X	
	858		EP-2	1		-002	X	
	903		EP-3	1		-003	X	
	905		EP-4	1		-004	X	
	913		EP-5	1		-005	X	
	916		EP-6	1		-006	X	
	931		EP-7	1		-007	X	
	924		EP-8	1		-008	X	
	934		EP-11	1		-009	X	
	942		EP-12A	1		-010	X	
	942		EP-12B	1		-011	X	
	1020		EB-111314	3		-012	X	
	1016		FB-111314	3		-013	X	
			TB-401	3		-014	X	
11-13-14	1100		Don Kanders / Ash Sanders					

Date: 11/13/14 Time: 1:00 Relinquished by: [Signature] Received by: [Signature] Date: 11/13/14 Time: 1:48

Remarks:



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

October 02, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW

OrderNo.: 1409453

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/10/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-3

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:05:00 AM

Lab ID: 1409453-001

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	9/10/2014 9:46:44 PM	R21137
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.011	0.0020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Cadmium	ND	0.0020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Chromium	ND	0.0060		mg/L	1	9/11/2014 2:27:41 PM	R21155
Copper	ND	0.0060		mg/L	1	9/11/2014 2:27:41 PM	R21155
Iron	0.13	0.020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Manganese	ND	0.0020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Silver	ND	0.0050		mg/L	1	9/11/2014 2:27:41 PM	R21155
Zinc	0.011	0.010		mg/L	1	9/11/2014 2:27:41 PM	R21155
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.011	0.0020		mg/L	1	9/12/2014 5:18:47 PM	15250
Cadmium	ND	0.0020		mg/L	1	9/12/2014 5:18:47 PM	15250
Chromium	ND	0.0060		mg/L	1	9/15/2014 11:15:52 AM	15250
Copper	ND	0.0060		mg/L	1	9/12/2014 5:18:47 PM	15250
Iron	0.30	0.020		mg/L	1	9/15/2014 11:15:52 AM	15250
Manganese	0.0025	0.0020		mg/L	1	9/12/2014 5:18:47 PM	15250
Silver	ND	0.0050		mg/L	1	9/30/2014 5:26:10 PM	15563
Zinc	0.010	0.010		mg/L	1	9/12/2014 5:18:47 PM	15250
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.0039	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
Lead	ND	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
Selenium	0.0020	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
Uranium	0.0016	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.0039	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
Lead	ND	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
Selenium	0.0019	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
Uranium	0.0016	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/15/2014 2:30:43 PM	15279
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Acenaphthylene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Aniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Anthracene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

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CLIENT: Western Refining Southwest, Gallup

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Lab ID: 1409453-001

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Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Azobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benz(a)anthracene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzoic acid	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzyl alcohol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Butyl benzyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Carbazole	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Chloroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Chlorophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Chrysene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Di-n-octyl phthalate	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Dibenzofuran	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Diethyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Dimethyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dichlorophenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dinitrophenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Fluoranthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Fluorene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
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CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-3

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Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Hexachlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Hexachloroethane	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Isophorone	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Methylphenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
3+4-Methylphenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Naphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
3-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Nitrobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Pentachlorophenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
Phenanthrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Phenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Pyrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Pyridine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Surr: 2-Fluorophenol	52.4	12.1-85.8		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: Phenol-d5	35.1	17.7-65.8		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: 2,4,6-Tribromophenol	57.6	26-138		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: Nitrobenzene-d5	71.0	47.5-119		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: 2-Fluorobiphenyl	69.2	48.1-106		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: 4-Terphenyl-d14	65.9	44-113		%REC	1	9/15/2014 4:35:49 PM	15274
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Toluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

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Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-3

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:05:00 AM

Lab ID: 1409453-001

Matrix: AQUEOUS

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Naphthalene	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Acetone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromoform	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromomethane	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Butanone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Carbon disulfide	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chloroethane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chloroform	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chloromethane	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Hexanone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
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EPA METHOD 8260B: VOLATILES							Analyst: KJH
4-Isopropyltoluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Styrene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/16/2014 10:55:14 PM	R21241
Surr: 1,2-Dichloroethane-d4	94.7	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241
Surr: Dibromofluoromethane	83.8	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241
Surr: Toluene-d8	97.4	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-2

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:50:00 AM

Lab ID: 1409453-002

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGP
Nitrogen, Nitrate (As N)	0.12	0.10		mg/L	1	9/10/2014 10:11:33 PM	R21137
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.012	0.0020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Cadmium	ND	0.0020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Chromium	ND	0.0060		mg/L	1	9/11/2014 2:40:37 PM	R21155
Copper	ND	0.0060		mg/L	1	9/11/2014 2:40:37 PM	R21155
Iron	0.042	0.020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Manganese	ND	0.0020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Silver	ND	0.0050		mg/L	1	9/11/2014 2:40:37 PM	R21155
Zinc	0.012	0.010		mg/L	1	9/11/2014 2:40:37 PM	R21155
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.014	0.0020		mg/L	1	9/12/2014 5:36:53 PM	15250
Cadmium	ND	0.0020		mg/L	1	9/12/2014 5:36:53 PM	15250
Chromium	ND	0.0060		mg/L	1	9/15/2014 11:23:08 AM	15250
Copper	ND	0.0060		mg/L	1	9/12/2014 5:36:53 PM	15250
Iron	0.050	0.020		mg/L	1	9/15/2014 11:23:08 AM	15250
Manganese	ND	0.0020		mg/L	1	9/12/2014 5:36:53 PM	15250
Silver	ND	0.0050		mg/L	1	9/30/2014 5:30:04 PM	15563
Zinc	ND	0.010		mg/L	1	9/12/2014 5:36:53 PM	15250
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.0031	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
Lead	ND	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
Selenium	0.0014	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
Uranium	0.0024	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.0033	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
Lead	ND	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
Selenium	0.0014	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
Uranium	0.0024	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/15/2014 2:32:34 PM	15279
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Acenaphthylene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Aniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Anthracene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-2

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:50:00 AM

Lab ID: 1409453-002

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Azobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benz(a)anthracene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzoic acid	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzyl alcohol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Butyl benzyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Carbazole	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Chloroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Chlorophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Chrysene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Di-n-octyl phthalate	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Dibenzofuran	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Diethyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Dimethyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dichlorophenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dinitrophenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Fluoranthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Fluorene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 7 of 30
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-2

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:50:00 AM

Lab ID: 1409453-002

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Hexachlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Hexachloroethane	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Isophorone	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Methylphenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
3+4-Methylphenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Naphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Nitroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
3-Nitroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Nitroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Nitrobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Nitrophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Nitrophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Pentachlorophenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
Phenanthrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Phenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Pyrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Pyridine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Surr: 2-Fluorophenol	53.2	12.1-85.8		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: Phenol-d5	35.8	17.7-65.8		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: 2,4,6-Tribromophenol	57.5	26-138		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: Nitrobenzene-d5	71.0	47.5-119		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: 2-Fluorobiphenyl	66.9	48.1-106		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: 4-Terphenyl-d14	67.2	44-113		%REC	1	9/15/2014 5:05:10 PM	15274
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Toluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 8 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-2

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:50:00 AM

Lab ID: 1409453-002

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Naphthalene	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Acetone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromoform	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromomethane	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Butanone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Carbon disulfide	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chloroethane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chloroform	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chloromethane	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Hexanone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 9 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409453**

Date Reported: **10/2/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-2

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:50:00 AM

Lab ID: 1409453-002

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
4-Isopropyltoluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Styrene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/16/2014 11:24:55 PM	R21241
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241
Surr: Dibromofluoromethane	89.6	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241
Surr: Toluene-d8	95.4	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 12

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:20:00 AM

Lab ID: 1409453-003

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Toluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Naphthalene	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Acetone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromoform	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromomethane	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Butanone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Carbon disulfide	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chloroethane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chloroform	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chloromethane	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 12

Project: 2014 Annual GW

Collection Date: 9/10/2014 8:20:00 AM

Lab ID: 1409453-003

Matrix: AQUEOUS

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Hexanone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
4-Isopropyltoluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Styrene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/17/2014 2:22:46 AM	R21241
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241
Surr: 4-Bromofluorobenzene	93.4	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241
Surr: Dibromofluoromethane	91.2	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241
Surr: Toluene-d8	92.9	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409453-004

Matrix: TRIP BLANK

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
Benzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Toluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Naphthalene	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Acetone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromoform	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromomethane	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Butanone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Carbon disulfide	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chloroethane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chloroform	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chloromethane	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409453

Date Reported: 10/2/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409453-004

Matrix: TRIP BLANK

Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,1-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Hexanone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
4-Isopropyltoluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Styrene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/17/2014 2:52:29 AM	R21241
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241
Surr: 4-Bromofluorobenzene	94.6	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241
Surr: Dibromofluoromethane	90.2	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241
Surr: Toluene-d8	96.6	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Anatek Labs, Inc.

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

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

Batch #: 140911039
Project Name: 1409453

Analytical Results Report

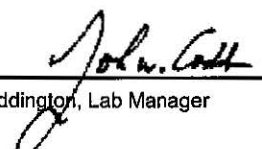
Sample Number	140911039-001	Sampling Date	9/10/2014	Date/Time Received	9/11/2014 11:55 AM
Client Sample ID	1409453-001F / PW-3	Sampling Time	8:05 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/17/2014	CRW	EPA 335.4	

Sample Number	140911039-002	Sampling Date	9/10/2014	Date/Time Received	9/11/2014 11:55 AM
Client Sample ID	1409453-002F / PW-2	Sampling Time	8:50 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/17/2014	CRW	EPA 335.4	

Authorized Signature


John Coddington, Lab Manager

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

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

Certifications held by Anatek Labs ID: EPA-ID00013; AZ:0701; CO-ID00013; FL(NELAP):E87893; ID-ID00013; MT:Cert0028; NM: ID00013; OR-ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Friday, September 19, 2014

Page 1 of 1

Anatek Labs, Inc.

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

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

Batch #: 140911039
Project Name: 1409453

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.519	mg/L	0.5	103.8	90-110	9/17/2014	9/17/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140911039-002	Cyanide	ND	0.502	mg/L	0.5	100.4	90-110	9/17/2014	9/17/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.506	mg/L	0.5	101.3	0.8	0-20	9/17/2014	9/17/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/17/2014	9/17/2014

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

Comments:

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

Friday, September 19, 2014

Page 1 of 1

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21155			RunNo: 21155					
Prep Date:		Analysis Date: 9/11/2014			SeqNo: 615741		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		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21155		RunNo: 21155					
Prep Date:			Analysis Date: 9/11/2014		SeqNo: 615742		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Chromium	0.47	0.0060	0.5000	0	94.7	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.47	0.020	0.5000	0	94.5	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Silver	0.49	0.0050	0.5000	0	98.2	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	1409453-002EMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PW-2		Batch ID: R21155		RunNo: 21155					
Prep Date:			Analysis Date: 9/11/2014		SeqNo: 615834		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01222	95.3	70	130			
Cadmium	0.47	0.0020	0.5000	0	93.8	70	130			
Chromium	0.47	0.0060	0.5000	0	93.6	70	130			
Copper	0.46	0.0060	0.5000	0	92.1	70	130			
Iron	0.54	0.020	0.5000	0.04219	99.0	70	130			
Manganese	0.49	0.0020	0.5000	0.001050	97.7	70	130			
Silver	0.41	0.0050	0.5000	0.003690	80.9	70	130			
Zinc	0.48	0.010	0.5000	0.01236	93.0	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409453-002EMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	PW-2		Batch ID:	R21155		RunNo:	21155				
Prep Date:			Analysis Date:	9/11/2014		SeqNo:	615835		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.49	0.0020	0.5000	0.01222	95.8	70	130	0.490	20		
Cadmium	0.47	0.0020	0.5000	0	94.7	70	130	0.957	20		
Chromium	0.47	0.0060	0.5000	0	93.5	70	130	0.0470	20		
Copper	0.47	0.0060	0.5000	0	93.2	70	130	1.26	20		
Iron	0.54	0.020	0.5000	0.04219	98.7	70	130	0.229	20		
Manganese	0.49	0.0020	0.5000	0.001050	98.2	70	130	0.450	20		
Silver	0.41	0.0050	0.5000	0.003690	82.0	70	130	1.27	20		
Zinc	0.50	0.010	0.5000	0.01236	97.3	70	130	4.39	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15250		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 15250		RunNo: 21179					
Prep Date:	9/12/2014		Analysis Date: 9/12/2014		SeqNo: 616404		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								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-15250		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 15250		RunNo: 21179					
Prep Date:	9/12/2014		Analysis Date: 9/12/2014		SeqNo: 616405		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Zinc	0.52	0.010	0.5000	0	105	85	115			

Sample ID	1409453-001DMS		SampType: MS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-3		Batch ID: 15250		RunNo: 21179					
Prep Date:	9/12/2014		Analysis Date: 9/12/2014		SeqNo: 616700		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0.01058	104	70	130			
Cadmium	0.52	0.0020	0.5000	0	105	70	130			
Copper	0.49	0.0060	0.5000	0	98.2	70	130			
Manganese	0.49	0.0020	0.5000	0.002490	97.7	70	130			
Zinc	0.50	0.010	0.5000	0.01050	98.5	70	130			

Sample ID	1409453-001DMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-3		Batch ID: 15250		RunNo: 21179					
Prep Date:	9/12/2014		Analysis Date: 9/12/2014		SeqNo: 616701		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0.01058	103	70	130	0.714	20	
Cadmium	0.52	0.0020	0.5000	0	103	70	130	1.46	20	
Copper	0.49	0.0060	0.5000	0	98.4	70	130	0.159	20	
Manganese	0.49	0.0020	0.5000	0.002490	96.6	70	130	1.10	20	
Zinc	0.51	0.010	0.5000	0.01050	99.6	70	130	1.11	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409453-002DMS		SampType: MS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-2		Batch ID: 15250		RunNo: 21179					
Prep Date:	9/12/2014		Analysis Date: 9/12/2014		SeqNo: 616710		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.01387	99.8	70	130			
Cadmium	0.50	0.0020	0.5000	0	101	70	130			
Copper	0.50	0.0060	0.5000	0	99.2	70	130			
Manganese	0.51	0.0020	0.5000	0.001120	102	70	130			
Zinc	0.50	0.010	0.5000	0	100	70	130			

Sample ID	1409453-002DMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-2		Batch ID: 15250		RunNo: 21179					
Prep Date:	9/12/2014		Analysis Date: 9/12/2014		SeqNo: 616711		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01387	95.7	70	130	4.02	20	
Cadmium	0.49	0.0020	0.5000	0	97.6	70	130	3.22	20	
Copper	0.48	0.0060	0.5000	0	96.1	70	130	3.23	20	
Manganese	0.49	0.0020	0.5000	0.001120	97.9	70	130	4.20	20	
Zinc	0.50	0.010	0.5000	0	99.6	70	130	0.908	20	

Sample ID	MB-15250		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 15250		RunNo: 21196					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617274		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	LCS-15250		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 15250		RunNo: 21196					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617275		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	105	85	115			

Sample ID	1409453-001DMS		SampType: MS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-3		Batch ID: 15250		RunNo: 21196					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617290		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	93.6	70	130			
Iron	0.76	0.020	0.5000	0.2988	92.4	70	130			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409453-001DMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-3		Batch ID: 15250		RunNo: 21196					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617291		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	93.3	70	130	0.298	20	
Iron	0.76	0.020	0.5000	0.2988	91.7	70	130	0.457	20	

Sample ID	1409453-002DMS		SampType: MS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-2		Batch ID: 15250		RunNo: 21196					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617294		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.48	0.0060	0.5000	0	96.1	70	130			
Iron	0.54	0.020	0.5000	0.05024	98.6	70	130			

Sample ID	1409453-002DMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PW-2		Batch ID: 15250		RunNo: 21196					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617295		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	93.6	70	130	2.63	20	
Iron	0.53	0.020	0.5000	0.05024	96.6	70	130	1.85	20	

Sample ID	MB-15563		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 15563		RunNo: 21558					
Prep Date:	9/27/2014		Analysis Date: 9/30/2014		SeqNo: 631358		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	LCS1-15563			SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW			Batch ID:	15563		RunNo:	21558			
Prep Date:	9/27/2014			Analysis Date:	9/30/2014		SeqNo:	631359		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.11	0.0050	0.1000	0	105	85	115				

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID LCS	SampType: LCS				TestCode: EPA 200.8: Dissolved Metals					
Client ID: LCSW	Batch ID: R21332				RunNo: 21332					
Prep Date:	Analysis Date: 9/19/2014				SeqNo: 622621		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	94.4	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.3	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID LCS	SampType: LCS				TestCode: EPA 200.8: Dissolved Metals					
Client ID: LCSW	Batch ID: R21332				RunNo: 21332					
Prep Date:	Analysis Date: 9/19/2014				SeqNo: 622622		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.2	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID MB	SampType: MBLK				TestCode: EPA 200.8: Dissolved Metals					
Client ID: PBW	Batch ID: R21332				RunNo: 21332					
Prep Date:	Analysis Date: 9/19/2014				SeqNo: 622623		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID MB	SampType: MBLK				TestCode: EPA 200.8: Dissolved Metals					
Client ID: PBW	Batch ID: R21332				RunNo: 21332					
Prep Date:	Analysis Date: 9/19/2014				SeqNo: 622624		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LLLCS-15250		SampType: LCSLL		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	BatchQC		Batch ID: 15250		RunNo: 21206					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617630		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	95.1	85	115			
Lead	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID	MB-15250		SampType: MBLK		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	PBW		Batch ID: 15250		RunNo: 21206					
Prep Date:	9/12/2014		Analysis Date: 9/15/2014		SeqNo: 617631		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15279		SampType: MBLK		TestCode: EPA Method 245.1: Mercury					
Client ID:	PBW		Batch ID: 15279		RunNo: 21205					
Prep Date:	9/15/2014		Analysis Date: 9/15/2014		SeqNo: 617635		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercurv	ND	0.00020								

Sample ID	LCS-15279		SampType: LCS		TestCode: EPA Method 245.1: Mercury					
Client ID:	LCSW		Batch ID: 15279		RunNo: 21205					
Prep Date:	9/15/2014		Analysis Date: 9/15/2014		SeqNo: 617636		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0055	0.00020	0.005000	0	109	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21137	RunNo:	21137					
Prep Date:		Analysis Date:	9/10/2014	SeqNo:	615456	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21137	RunNo:	21137					
Prep Date:		Analysis Date:	9/10/2014	SeqNo:	615457	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21241			RunNo: 21241					
Prep Date:		Analysis Date: 9/16/2014			SeqNo: 619016		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R21241			RunNo: 21241						
Prep Date:	Analysis Date: 9/16/2014			SeqNo: 619016		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.0	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R21241			RunNo: 21241						
Prep Date:	Analysis Date: 9/16/2014			SeqNo: 619018		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.4	70	130			
Toluene	22	1.0	20.00	0	112	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R21241			RunNo: 21241					
Prep Date:		Analysis Date: 9/16/2014			SeqNo: 619018		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15274	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15274	RunNo:	21200					
Prep Date:	9/15/2014	Analysis Date:	9/15/2014	SeqNo:	617967	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	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15274	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15274	RunNo:	21200					
Prep Date:	9/15/2014	Analysis Date:	9/15/2014	SeqNo:	617967	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
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	100		200.0		50.8	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.0	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		65.9	26	138			
Surr: Nitrobenzene-d5	70		100.0		69.7	47.5	119			
Surr: 2-Fluorobiphenyl	66		100.0		65.5	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		73.2	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcs-15274		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 15274		RunNo: 21200					
Prep Date:	9/15/2014		Analysis Date: 9/15/2014		SeqNo: 617970		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.2	50.3	109			
4-Chloro-3-methylphenol	140	10	200.0	0	69.5	51.2	113			
2-Chlorophenol	130	10	200.0	0	66.8	48.5	104			
1,4-Dichlorobenzene	52	10	100.0	0	52.0	39.5	106			
2,4-Dinitrotoluene	54	10	100.0	0	54.5	45.4	107			
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.8	50.4	119			
4-Nitrophenol	66	10	200.0	0	33.0	15.5	62.2			
Pentachlorophenol	100	20	200.0	0	50.1	23.5	93.5			
Phenol	80	10	200.0	0	40.0	26.8	65.6			
Pyrene	71	10	100.0	0	70.7	54.4	108			
1,2,4-Trichlorobenzene	55	10	100.0	0	54.7	39.9	106			
Surr: 2-Fluorophenol	100		200.0		50.2	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		74.4	26	138			
Surr: Nitrobenzene-d5	68		100.0		67.9	47.5	119			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	48.1	106			
Surr: 4-Terphenyl-d14	82		100.0		82.5	44	113			

Sample ID	lcsd-15274		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 15274		RunNo: 21200					
Prep Date:	9/15/2014		Analysis Date: 9/15/2014		SeqNo: 617972		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.4	50.3	109	4.98	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	70.9	51.2	113	1.99	25.9	
2-Chlorophenol	150	10	200.0	0	73.3	48.5	104	9.27	22.5	
1,4-Dichlorobenzene	55	10	100.0	0	55.4	39.5	106	6.29	24.6	
2,4-Dinitrotoluene	65	10	100.0	0	64.8	45.4	107	17.3	25.3	
N-Nitrosodi-n-propylamine	66	10	100.0	0	66.2	50.4	119	8.48	23.6	
4-Nitrophenol	61	10	200.0	0	30.5	15.5	62.2	7.87	34.7	
Pentachlorophenol	100	20	200.0	0	51.0	23.5	93.5	1.82	32.8	
Phenol	90	10	200.0	0	45.0	26.8	65.6	11.7	25.5	
Pyrene	78	10	100.0	0	77.8	54.4	108	9.51	31.4	
1,2,4-Trichlorobenzene	56	10	100.0	0	55.5	39.9	106	1.60	25.9	
Surr: 2-Fluorophenol	97		200.0		48.6	12.1	85.8	0	0	
Surr: Phenol-d5	72		200.0		35.9	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		67.3	26	138	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.1	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		62.7	48.1	106	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409453

02-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcscd-15274	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	15274	RunNo:	21200					
Prep Date:	9/15/2014	Analysis Date:	9/15/2014	SeqNo:	617972	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	79		100.0		79.4	44	113	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1409453

RcptNo: 1

Received by/date: MLH 09/10/14

Logged By: **Lindsay Mangin** 9/10/2014 12:00:00 PM *[Signature]*

Completed By: **Lindsay Mangin** 9/10/2014 12:16:46 PM *[Signature]*

Reviewed By: mg 09/10/14

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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, 2
(<2 or >12 unless noted)
Adjusted? no
Checked by: CS

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	2.4	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard

☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP

☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

14/09/10/14
2011 ANNUAL GW

Project #:

PW-2-3-1 *BS*

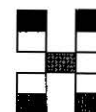
Project Manager:

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

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 2-4



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved, filtered	Cyanide	Nitrates	Air Bubbles (Y or N)
9/10/14	0805	H ₂ O	PW-3	VARIOUS	VARIOUS	-001	X	X	X	X	X	X	
9/10/14	0850	H ₂ O	PW-2	VARIOUS	VARIOUS	-002	X	X	X	X	X	X	
9/10/14	0820	H ₂ O	FB-Group 12	VOA	HCl	-003	X						
			Trip blank	3 VOA	HCl	-004	X						
					09/10/14								

Date: 9/10/14 Time: 0946 Relinquished by: *[Signature]* Received by: *[Signature]* Date: 9/10/14 Time: 0946

Date: 09/10/14 Time: 1200 Relinquished by: *[Signature]* Received by: *[Signature]* Date: 09/10/14 Time: 1200

Remarks:

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



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

October 08, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW

OrderNo.: 1409A38

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/19/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2014 Annual GW

Collection Date: 9/16/2014 4:15:00 PM

Lab ID: 1409A38-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 11:13:20 PM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 11:13:20 PM	15389
Surr: DNOP	112	59-141		%REC	1	9/23/2014 11:13:20 PM	15389
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 7:32:53 PM	R21468
Surr: BFB	88.3	70.9-130		%REC	1	9/25/2014 7:32:53 PM	R21468
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	0.69	0.10		mg/L	1	9/22/2014 10:20:55 PM	R21368
Chloride	44	10		mg/L	20	9/22/2014 10:33:19 PM	R21368
Bromide	0.11	0.10		mg/L	1	9/22/2014 10:20:55 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 10:20:55 PM	R21368
Sulfate	150	10		mg/L	20	9/22/2014 10:33:19 PM	R21368
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/23/2014 12:25:02 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.0095	0.0020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Calcium	1.6	1.0		mg/L	1	9/24/2014 4:47:29 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:47:29 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:47:29 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:47:29 PM	R21433
Manganese	0.0027	0.0020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Potassium	1.5	1.0		mg/L	1	9/24/2014 4:47:29 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:47:29 PM	R21433
Sodium	250	10		mg/L	10	9/25/2014 2:03:16 PM	R21450
Zinc	0.014	0.010		mg/L	1	9/24/2014 4:47:29 PM	R21433
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.012	0.0020		mg/L	1	9/25/2014 3:24:08 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:24:08 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:24:08 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:24:08 PM	15445
Iron	0.11	0.020		mg/L	1	9/25/2014 3:24:08 PM	15445
Manganese	0.012	0.0020		mg/L	1	9/25/2014 3:24:08 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:24:08 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:24:08 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.0012	0.0010		mg/L	1	9/30/2014 2:35:45 PM	R21559

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2014 Annual GW

Collection Date: 9/16/2014 4:15:00 PM

Lab ID: 1409A38-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	ND	0.0010		mg/L	1	9/30/2014 2:35:45 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 5:53:54 PM	R21629
Uranium	0.011	0.0010		mg/L	1	9/30/2014 2:35:45 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.0011	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
Lead	0.0017	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
Uranium	0.012	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:28:16 PM	15531
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2014 Annual GW

Collection Date: 9/16/2014 4:15:00 PM

Lab ID: 1409A38-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 54
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2014 Annual GW

Collection Date: 9/16/2014 4:15:00 PM

Lab ID: 1409A38-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Pyrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Surr: 2-Fluorophenol	75.1	12.1-85.8		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: Phenol-d5	63.8	17.7-65.8		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: 2,4,6-Tribromophenol	68.6	26-138		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: Nitrobenzene-d5	88.7	47.5-119		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: 2-Fluorobiphenyl	82.0	48.1-106		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: 4-Terphenyl-d14	82.2	44-113		%REC	1	9/25/2014 12:03:48 PM	15441
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2014 Annual GW

Collection Date: 9/16/2014 4:15:00 PM

Lab ID: 1409A38-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 12:33:11 AM	R21429
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 2014 Annual GW

Collection Date: 9/16/2014 4:15:00 PM

Lab ID: 1409A38-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	99.9	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429
Surr: Dibromofluoromethane	97.2	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429
Surr: Toluene-d8	92.3	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 54
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2014 Annual GW

Collection Date: 9/16/2014 7:00:00 PM

Lab ID: 1409A38-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 11:34:38 PM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 11:34:38 PM	15389
Surr: DNOP	136	59-141		%REC	1	9/23/2014 11:34:38 PM	15389
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 9:33:32 PM	R21468
Surr: BFB	87.6	70.9-130		%REC	1	9/25/2014 9:33:32 PM	R21468
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	0.73	0.10		mg/L	1	9/22/2014 11:10:34 PM	R21368
Chloride	51	10		mg/L	20	9/22/2014 11:22:58 PM	R21368
Bromide	0.11	0.10		mg/L	1	9/22/2014 11:10:34 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 11:10:34 PM	R21368
Sulfate	150	10		mg/L	20	9/22/2014 11:22:58 PM	R21368
Nitrate+Nitrite as N	21	1.0	*	mg/L	5	10/2/2014 6:19:18 AM	R21604
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.017	0.0020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Calcium	1.5	1.0		mg/L	1	9/24/2014 4:49:22 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:49:22 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:49:22 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:49:22 PM	R21433
Manganese	0.0026	0.0020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Potassium	1.5	1.0		mg/L	1	9/24/2014 4:49:22 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:49:22 PM	R21433
Sodium	250	10		mg/L	10	9/25/2014 2:04:57 PM	R21450
Zinc	0.026	0.010		mg/L	1	9/24/2014 4:49:22 PM	R21433
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.019	0.0020		mg/L	1	9/25/2014 3:26:02 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:26:02 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:26:02 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:26:02 PM	15445
Iron	ND	0.020		mg/L	1	9/25/2014 3:26:02 PM	15445
Manganese	0.0031	0.0020		mg/L	1	9/25/2014 3:26:02 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:26:02 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:26:02 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.0012	0.0010		mg/L	1	9/30/2014 2:38:52 PM	R21559

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2014 Annual GW

Collection Date: 9/16/2014 7:00:00 PM

Lab ID: 1409A38-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	ND	0.0010		mg/L	1	9/30/2014 2:38:52 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 5:57:01 PM	R21629
Uranium	0.0093	0.0010		mg/L	1	9/30/2014 2:38:52 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
Uranium	0.0095	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:30:01 PM	15531
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441

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	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2014 Annual GW

Collection Date: 9/16/2014 7:00:00 PM

Lab ID: 1409A38-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 9 of 54
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2014 Annual GW

Collection Date: 9/16/2014 7:00:00 PM

Lab ID: 1409A38-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Pyrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Surr: 2-Fluorophenol	77.6	12.1-85.8		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: Phenol-d5	69.0	17.7-65.8	S	%REC	1	9/25/2014 12:32:58 PM	15441
Surr: 2,4,6-Tribromophenol	74.4	26-138		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: Nitrobenzene-d5	100	47.5-119		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: 2-Fluorobiphenyl	91.0	48.1-106		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: 4-Terphenyl-d14	95.2	44-113		%REC	1	9/25/2014 12:32:58 PM	15441
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2014 Annual GW

Collection Date: 9/16/2014 7:00:00 PM

Lab ID: 1409A38-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 1:02:50 AM	R21429
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 2014 Annual GW

Collection Date: 9/16/2014 7:00:00 PM

Lab ID: 1409A38-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	96.7	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429
Surr: Dibromofluoromethane	94.0	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429
Surr: Toluene-d8	90.3	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 12 of 54
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2014 Annual GW

Collection Date: 9/17/2014 11:40:00 AM

Lab ID: 1409A38-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 11:56:03 PM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 11:56:03 PM	15389
Surr: DNOP	143	59-141	S	%REC	1	9/23/2014 11:56:03 PM	15389
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 10:03:38 PM	R21468
Surr: BFB	90.5	70.9-130		%REC	1	9/25/2014 10:03:38 PM	R21468
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	0.73	0.10		mg/L	1	9/22/2014 11:35:23 PM	R21368
Chloride	56	10		mg/L	20	9/22/2014 11:47:48 PM	R21368
Bromide	0.12	0.10		mg/L	1	9/22/2014 11:35:23 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 11:35:23 PM	R21368
Sulfate	150	10		mg/L	20	9/22/2014 11:47:48 PM	R21368
Nitrate+Nitrite as N	1.1	1.0		mg/L	5	9/23/2014 12:49:52 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.015	0.0020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Calcium	1.6	1.0		mg/L	1	9/24/2014 4:51:16 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:51:16 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:51:16 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:51:16 PM	R21433
Manganese	0.0045	0.0020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Potassium	1.6	1.0		mg/L	1	9/24/2014 4:51:16 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:51:16 PM	R21433
Sodium	250	10		mg/L	10	9/25/2014 2:06:38 PM	R21450
Zinc	0.025	0.010		mg/L	1	9/24/2014 4:51:16 PM	R21433
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.019	0.0020		mg/L	1	9/25/2014 3:27:55 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:27:55 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:27:55 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:27:55 PM	15445
Iron	ND	0.020		mg/L	1	9/25/2014 3:27:55 PM	15445
Manganese	0.0046	0.0020		mg/L	1	9/25/2014 3:27:55 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:27:55 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:27:55 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.0012	0.0010		mg/L	1	9/30/2014 2:41:59 PM	R21559

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2014 Annual GW

Collection Date: 9/17/2014 11:40:00 AM

Lab ID: 1409A38-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	ND	0.0010		mg/L	1	9/30/2014 2:41:59 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 6:00:07 PM	R21629
Uranium	0.0094	0.0010		mg/L	1	9/30/2014 2:41:59 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.0010	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
Uranium	0.0098	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:31:47 PM	15531
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441

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	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2014 Annual GW

Collection Date: 9/17/2014 11:40:00 AM

Lab ID: 1409A38-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2014 Annual GW

Collection Date: 9/17/2014 11:40:00 AM

Lab ID: 1409A38-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES				Analyst: JDC			
Pyrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Surr: 2-Fluorophenol	65.6	12.1-85.8		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: Phenol-d5	56.1	17.7-65.8		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: 2,4,6-Tribromophenol	63.5	26-138		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: Nitrobenzene-d5	77.7	47.5-119		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: 2-Fluorobiphenyl	71.6	48.1-106		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: 4-Terphenyl-d14	84.7	44-113		%REC	1	9/25/2014 1:02:13 PM	15441
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
Benzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2014 Annual GW

Collection Date: 9/17/2014 11:40:00 AM

Lab ID: 1409A38-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 1:32:26 AM	R21429
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 2014 Annual GW

Collection Date: 9/17/2014 11:40:00 AM

Lab ID: 1409A38-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	99.3	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429
Surr: Dibromofluoromethane	95.0	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429
Surr: Toluene-d8	95.3	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 18 of 54
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2014 Annual GW

Collection Date: 9/17/2014 3:15:00 PM

Lab ID: 1409A38-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/24/2014 12:17:27 AM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/24/2014 12:17:27 AM	15389
Surr: DNOP	141	59-141	S	%REC	1	9/24/2014 12:17:27 AM	15389
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 10:33:48 PM	R21468
Surr: BFB	91.6	70.9-130		%REC	1	9/25/2014 10:33:48 PM	R21468
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	0.31	0.10		mg/L	1	9/23/2014 12:00:12 AM	R21368
Chloride	18	0.50		mg/L	1	9/23/2014 12:00:12 AM	R21368
Bromide	0.14	0.10		mg/L	1	9/23/2014 12:00:12 AM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/23/2014 12:00:12 AM	R21368
Sulfate	140	10		mg/L	20	9/23/2014 12:12:37 AM	R21368
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/23/2014 2:04:19 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.018	0.0020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Calcium	1.9	1.0		mg/L	1	9/24/2014 4:53:10 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:53:10 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:53:10 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:53:10 PM	R21433
Manganese	0.0057	0.0020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Potassium	1.7	1.0		mg/L	1	9/24/2014 4:53:10 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:53:10 PM	R21433
Sodium	280	5.0		mg/L	5	9/25/2014 5:11:53 PM	R21450
Zinc	ND	0.010		mg/L	1	9/24/2014 4:53:10 PM	R21433
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.022	0.0020		mg/L	1	9/25/2014 3:29:48 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:29:48 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:29:48 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:29:48 PM	15445
Iron	ND	0.020		mg/L	1	9/25/2014 3:29:48 PM	15445
Manganese	0.0061	0.0020		mg/L	1	9/25/2014 3:29:48 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:29:48 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:29:48 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	9/30/2014 2:45:05 PM	R21559

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2014 Annual GW

Collection Date: 9/17/2014 3:15:00 PM

Lab ID: 1409A38-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	ND	0.0010		mg/L	1	9/30/2014 2:45:05 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 6:03:13 PM	R21629
Uranium	0.017	0.0010		mg/L	1	9/30/2014 2:45:05 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
Uranium	0.018	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:33:32 PM	15531
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2014 Annual GW

Collection Date: 9/17/2014 3:15:00 PM

Lab ID: 1409A38-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2014 Annual GW

Collection Date: 9/17/2014 3:15:00 PM

Lab ID: 1409A38-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Pyrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Surr: 2-Fluorophenol	78.8	12.1-85.8		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: Phenol-d5	68.9	17.7-65.8	S	%REC	1	9/25/2014 1:31:36 PM	15441
Surr: 2,4,6-Tribromophenol	65.9	26-138		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: Nitrobenzene-d5	90.0	47.5-119		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: 2-Fluorobiphenyl	86.7	48.1-106		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: 4-Terphenyl-d14	91.9	44-113		%REC	1	9/25/2014 1:31:36 PM	15441
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2014 Annual GW

Collection Date: 9/17/2014 3:15:00 PM

Lab ID: 1409A38-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 2:02:01 AM	R21429
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 2014 Annual GW

Collection Date: 9/17/2014 3:15:00 PM

Lab ID: 1409A38-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429
Surr: Dibromofluoromethane	94.2	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429
Surr: Toluene-d8	94.0	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 24 of 54
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409A38-005

Matrix: TRIP BLANK

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 11:03:55 PM	R21468
Surr: BFB	88.3	70.9-130		%REC	1	9/25/2014 11:03:55 PM	R21468
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409A38-005

Matrix: TRIP BLANK

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 2:31:36 AM	R21429
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429
Surr: Dibromofluoromethane	94.0	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429
Surr: Toluene-d8	92.6	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-#2-9/19/14

Project: 2014 Annual GW

Collection Date: 9/19/2014 8:40:00 AM

Lab ID: 1409A38-006

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-#2-9/19/14

Project: 2014 Annual GW

Collection Date: 9/19/2014 8:40:00 AM

Lab ID: 1409A38-006

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 3:01:17 AM	R21429
Surr: 1,2-Dichloroethane-d4	89.0	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429
Surr: Dibromofluoromethane	91.1	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429
Surr: Toluene-d8	92.4	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-#1-9/19/14

Project: 2014 Annual GW

Collection Date: 9/19/2014 8:30:00 AM

Lab ID: 1409A38-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Toluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Naphthalene	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Acetone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromoform	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromomethane	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Butanone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Carbon disulfide	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chloroethane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chloroform	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chloromethane	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: EB-#1-9/19/14

Project: 2014 Annual GW

Collection Date: 9/19/2014 8:30:00 AM

Lab ID: 1409A38-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Hexanone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Styrene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 2:18:02 PM	R21469
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469
Surr: Dibromofluoromethane	85.8	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469
Surr: Toluene-d8	92.7	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A38

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 10-9/16/14f

Project: 2014 Annual GW

Collection Date: 9/16/2014 5:00:00 PM

Lab ID: 1409A38-008

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A38**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 10-9/16/14f

Project: 2014 Annual GW

Collection Date: 9/16/2014 5:00:00 PM

Lab ID: 1409A38-008

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 4:00:37 AM	R21429
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429
Surr: Dibromofluoromethane	90.9	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429
Surr: Toluene-d8	92.5	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Anatek Labs, Inc.

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

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

Batch #: 140923034
Project Name: 1409A38

Analytical Results Report

Sample Number 140923034-001 **Sampling Date** 9/16/2014 **Date/Time Received** 9/23/2014 11:40 AM
Client Sample ID 1409A38-001H / MW-1 **Sampling Time** 4:15 PM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2014	CRW	EPA 335.4	

Sample Number 140923034-002 **Sampling Date** 9/16/2014 **Date/Time Received** 9/23/2014 11:40 AM
Client Sample ID 1409A38-002H / MW-2 **Sampling Time** 7:00 PM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2014	CRW	EPA 335.4	

Sample Number 140923034-003 **Sampling Date** 9/17/2014 **Date/Time Received** 9/23/2014 11:40 AM
Client Sample ID 1409A38-003H / MW-5 **Sampling Time** 11:40 AM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/26/2014	CRW	EPA 335.4	

Anatek Labs, Inc.

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

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

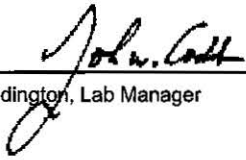
Batch #: 140923034
Project Name: 1409A38

Analytical Results Report

Sample Number	140923034-004	Sampling Date	9/17/2014	Date/Time Received	9/23/2014 11:40 AM
Client Sample ID	1409A38-004H / MW-4	Sampling Time	3:15 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/26/2014	CRW	EPA 335.4	

Authorized Signature


John Coddington, Lab Manager

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

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

Anatek Labs, Inc.

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

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

Batch #: 140923034
Project Name: 1409A38

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.485	mg/L	0.5	97.0	90-110	9/26/2014	9/26/2014
Cyanide	0.502	mg/L	0.5	100.4	90-110	9/25/2014	9/25/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140925068-001	Cyanide	ND	0.489	mg/L	0.5	97.8	90-110	9/26/2014	9/26/2014
140923034-002	Cyanide	ND	0.503	mg/L	0.5	100.6	90-110	9/25/2014	9/25/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.477	mg/L	0.5	95.4	2.5	0-20	9/26/2014	9/26/2014
Cyanide	0.514	mg/L	0.5	102.8	2.2	0-20	9/25/2014	9/25/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/26/2014	9/26/2014
Cyanide	ND	mg/L	0.01	9/25/2014	9/25/2014

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

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert00095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID MB	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: R21433		RunNo: 21433							
Prep Date:	Analysis Date: 9/24/2014		SeqNo: 626248		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: R21433		RunNo: 21433							
Prep Date:	Analysis Date: 9/24/2014		SeqNo: 626249		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	0.47	0.0020	0.5000	0	93.3	85	115			
Cadmium	0.47	0.0020	0.5000	0	93.8	85	115			
Calcium	48	1.0	50.00	0	97.0	85	115			
Chromium	0.46	0.0060	0.5000	0	91.5	85	115			
Copper	0.46	0.0060	0.5000	0	92.7	85	115			
Iron	0.48	0.020	0.5000	0	96.4	85	115			
Magnesium	48	1.0	50.00	0	97.0	85	115			
Manganese	0.47	0.0020	0.5000	0	93.8	85	115			
Potassium	48	1.0	50.00	0	96.1	85	115			
Silver	0.097	0.0050	0.1000	0	97.0	85	115			
Zinc	0.47	0.010	0.5000	0	94.6	85	115			

Sample ID MB	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: R21433		RunNo: 21433							
Prep Date:	Analysis Date: 9/24/2014		SeqNo: 626252		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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID MB	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: R21433		RunNo: 21433							
Prep Date:	Analysis Date: 9/24/2014		SeqNo: 626252		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: LCSW	Batch ID: R21433		RunNo: 21433							
Prep Date:	Analysis Date: 9/24/2014		SeqNo: 626253		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.5	85	115			
Calcium	49	1.0	50.00	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	95.3	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	97.9	85	115			
Manganese	0.49	0.0020	0.5000	0	98.4	85	115			
Potassium	48	1.0	50.00	0	96.2	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	98.6	85	115			

Sample ID 1409A38-004GMS	SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: MW-4	Batch ID: R21433		RunNo: 21433							
Prep Date:	Analysis Date: 9/24/2014		SeqNo: 626544		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01835	94.6	70	130			
Cadmium	0.46	0.0020	0.5000	0	91.4	70	130			
Calcium	49	1.0	50.00	1.897	93.8	70	130			
Chromium	0.46	0.0060	0.5000	0	91.3	70	130			
Copper	0.47	0.0060	0.5000	0	93.5	70	130			
Iron	0.48	0.020	0.5000	0	95.8	70	130			
Magnesium	47	1.0	50.00	0.1930	92.8	70	130			
Manganese	0.48	0.0020	0.5000	0.005660	95.2	70	130			
Potassium	50	1.0	50.00	1.719	97.3	70	130			
Silver	0.086	0.0050	0.1000	0	86.3	70	130			
Zinc	0.48	0.010	0.5000	0.006380	94.9	70	130			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409A38-004GMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	MW-4		Batch ID: R21433		RunNo: 21433					
Prep Date:			Analysis Date: 9/24/2014		SeqNo: 626546		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01835	93.6	70	130	1.01	20	
Cadmium	0.45	0.0020	0.5000	0	90.8	70	130	0.678	20	
Calcium	50	1.0	50.00	1.897	95.6	70	130	1.77	20	
Chromium	0.45	0.0060	0.5000	0	90.6	70	130	0.746	20	
Copper	0.46	0.0060	0.5000	0	92.4	70	130	1.16	20	
Iron	0.49	0.020	0.5000	0	97.4	70	130	1.60	20	
Magnesium	47	1.0	50.00	0.1930	94.6	70	130	1.84	20	
Manganese	0.48	0.0020	0.5000	0.005660	94.3	70	130	0.974	20	
Potassium	51	1.0	50.00	1.719	98.9	70	130	1.58	20	
Silver	0.084	0.0050	0.1000	0	84.2	70	130	2.49	20	
Zinc	0.48	0.010	0.5000	0.006380	95.0	70	130	0.181	20	

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21450			RunNo: 21450					
Prep Date:		Analysis Date: 9/25/2014			SeqNo: 626978		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	LCS		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21450		RunNo: 21450					
Prep Date:			Analysis Date: 9/25/2014		SeqNo: 626979		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	98.5	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15445		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 15445		RunNo: 21391					
Prep Date:	9/23/2014		Analysis Date: 9/23/2014		SeqNo: 624989		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-15445		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 15445		RunNo: 21391					
Prep Date:	9/23/2014		Analysis Date: 9/23/2014		SeqNo: 624990		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.49	0.0060	0.5000	0	97.7	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Manganese	0.50	0.0020	0.5000	0	99.8	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21559		RunNo: 21559					
Prep Date:			Analysis Date: 9/30/2014		SeqNo: 631540		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.5	85	115			
Lead	0.023	0.0010	0.02500	0	92.9	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID: R21559			RunNo: 21559					
Prep Date:		Analysis Date: 9/30/2014			SeqNo: 631542		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21559		RunNo: 21559					
Prep Date:			Analysis Date: 9/30/2014		SeqNo: 631545		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.1	85	115			
Lead	0.023	0.0010	0.02500	0	90.3	85	115			
Uranium	0.023	0.0010	0.02500	0	92.2	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID: R21559			RunNo: 21559					
Prep Date:		Analysis Date: 9/30/2014			SeqNo: 631546		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21629		RunNo: 21629					
Prep Date:			Analysis Date: 10/2/2014		SeqNo: 634388		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	89.3	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21629		RunNo: 21629					
Prep Date:			Analysis Date: 10/2/2014		SeqNo: 634389		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	92.8	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID: R21629			RunNo: 21629					
Prep Date:		Analysis Date: 10/2/2014			SeqNo: 634390		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID: R21629			RunNo: 21629					
Prep Date:		Analysis Date: 10/2/2014			SeqNo: 634391		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409A38-004FLLMS			SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	MW-4			Batch ID:	15445		RunNo:	21619		
Prep Date:	9/23/2014			Analysis Date:	10/2/2014		SeqNo:	634154		
							Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.0005544	100	70	130			
Lead	0.027	0.0010	0.02500	0	109	70	130			
Selenium	0.025	0.0010	0.02500	0	99.8	70	130			
Uranium	0.046	0.0010	0.02500	0.01754	112	70	130			

Sample ID	LL LCS-15445			SampType:	LCSLL		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	BatchQC			Batch ID:	15445		RunNo:	21619		
Prep Date:	9/23/2014			Analysis Date:	10/2/2014		SeqNo:	634155		
							Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.027	0.0010	0.02500	0	107	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Uranium	0.027	0.0010	0.02500	0	106	85	115			

Sample ID	MB-15445			SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total		
Client ID:	PBW			Batch ID:	15445		RunNo:	21619		
Prep Date:	9/23/2014			Analysis Date:	10/2/2014		SeqNo:	634158		
							Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15531	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	15531	RunNo:	21492					
Prep Date:	9/26/2014	Analysis Date:	9/26/2014	SeqNo:	628445	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-15531	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	15531	RunNo:	21492					
Prep Date:	9/26/2014	Analysis Date:	9/26/2014	SeqNo:	628446	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0056	0.00020	0.005000	0	111	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623985	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623986	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.1	90	110			
Sulfate	9.7	0.50	10.00	0	97.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.5	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	624032	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	624033	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.4	90	110			
Chloride	4.6	0.50	5.000	0	91.7	90	110			
Bromide	2.4	0.10	2.500	0	94.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.4	90	110			
Sulfate	9.4	0.50	10.00	0	93.8	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.6	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2.

RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21604	RunNo:	21604					
Prep Date:		Analysis Date:	10/1/2014	SeqNo:	633648	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21604	RunNo:	21604					
Prep Date:		Analysis Date:	10/1/2014	SeqNo:	633649	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	98.1	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21604	RunNo:	21604					
Prep Date:		Analysis Date:	10/1/2014	SeqNo:	633702	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21604	RunNo:	21604					
Prep Date:		Analysis Date:	10/1/2014	SeqNo:	633703	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15389		SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	PBW		Batch ID: 15389		RunNo: 21359					
Prep Date:	9/18/2014		Analysis Date: 9/23/2014		SeqNo: 625279		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		119	59	141			

Sample ID	LCS-15389		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	LCSW		Batch ID: 15389		RunNo: 21359					
Prep Date:	9/18/2014		Analysis Date: 9/23/2014		SeqNo: 625280		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.3	1.0	5.000	0	86.6	69.7	142			
Surr: DNOP	0.57		0.5000		115	59	141			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	R21468	RunNo:	21468					
Prep Date:		Analysis Date:	9/25/2014	SeqNo:	627652	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	17		20.00		82.8	70.9	130			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	R21468	RunNo:	21468					
Prep Date:		Analysis Date:	9/25/2014	SeqNo:	627653	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.4	80	120			
Surr: BFB	19		20.00		94.7	70.9	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R21429	RunNo:	21429					
Prep Date:		Analysis Date:	9/24/2014	SeqNo:	626079	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21429			RunNo: 21429					
Prep Date:		Analysis Date: 9/24/2014			SeqNo: 626079		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.6	70	130			
Surr: Toluene-d8	9.0		10.00		90.1	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R21429			RunNo: 21429					
Prep Date:		Analysis Date: 9/24/2014			SeqNo: 626089		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Toluene	21	1.0	20.00	0	104	80	120			
Chlorobenzene	20	1.0	20.00	0	98.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R21429			RunNo: 21429					
Prep Date:		Analysis Date: 9/24/2014			SeqNo: 626089		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	89.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.2	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID	5mL-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21469			RunNo: 21469					
Prep Date:		Analysis Date: 9/25/2014			SeqNo: 627686		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21469			RunNo: 21469					
Prep Date:		Analysis Date: 9/25/2014			SeqNo: 627686	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.4	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb		SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	PBW		Batch ID:	R21469		RunNo:	21469			
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627686		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.1	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Sample ID	100ng lcs		SampType:	LCS		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	LCSW		Batch ID:	R21469		RunNo:	21469			
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627689		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Toluene	20	1.0	20.00	0	102	80	120			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	89.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.4	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID	1409A38-006a ms		SampType:	MS		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	EB-#2-9/19/14		Batch ID:	R21469		RunNo:	21469			
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627706		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0.1580	91.3	70	130			
Toluene	18	1.0	20.00	0.3380	89.1	70	130			
Chlorobenzene	19	1.0	20.00	0	93.3	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.1	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	8.6		10.00		86.3	70	130			
Surr: Toluene-d8	9.3		10.00		92.9	70	130			

Sample ID	1409A38-006a msd		SampType:	MSD		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	EB-#2-9/19/14		Batch ID:	R21469		RunNo:	21469			
Prep Date:			Analysis Date:	9/25/2014		SeqNo:	627707		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0.1580	97.7	70	130	6.70	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409A38-006a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES							
Client ID:	EB-#2-9/19/14	Batch ID: R21469	RunNo: 21469							
Prep Date:		Analysis Date: 9/25/2014	SeqNo: 627707		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	18	1.0	20.00	0.3380	86.7	70	130	2.63	20	
Chlorobenzene	18	1.0	20.00	0	91.9	70	130	1.49	20	
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130	5.30	20	
Trichloroethene (TCE)	16	1.0	20.00	0	80.9	70	130	3.87	20	
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130	0	0	
Surr: Dibromofluoromethane	8.8		10.00		87.5	70	130	0	0	
Surr: Toluene-d8	9.1		10.00		90.8	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15441	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15441	RunNo:	21456					
Prep Date:	9/23/2014	Analysis Date:	9/25/2014	SeqNo:	627190	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	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15441	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15441	RunNo:	21456					
Prep Date:	9/23/2014	Analysis Date:	9/25/2014	SeqNo:	627190	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
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	140		200.0		70.6	12.1	85.8			
Surr: Phenol-d5	120		200.0		59.6	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		57.2	26	138			
Surr: Nitrobenzene-d5	74		100.0		74.0	47.5	119			
Surr: 2-Fluorobiphenyl	68		100.0		67.5	48.1	106			
Surr: 4-Terphenyl-d14	68		100.0		67.6	44	113			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcs-15441		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 15441		RunNo: 21456					
Prep Date:	9/23/2014		Analysis Date: 9/25/2014		SeqNo: 627191		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	80.1	47.9	114			
4-Chloro-3-methylphenol	170	10	200.0	0	86.8	51.7	122			
2-Chlorophenol	170	10	200.0	0	83.2	40.7	113			
1,4-Dichlorobenzene	66	10	100.0	0	66.5	39.6	99.9			
2,4-Dinitrotoluene	75	10	100.0	0	74.6	40.8	113			
N-Nitrosodi-n-propylamine	77	10	100.0	0	76.5	51.2	111			
4-Nitrophenol	140	10	200.0	0	68.0	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	62.9	21.6	104			
Phenol	140	10	200.0	0	69.0	28.6	71.7			
Pyrene	84	10	100.0	0	83.7	54.2	128			
1,2,4-Trichlorobenzene	64	10	100.0	0	63.7	40.9	101			
Surr: 2-Fluorophenol	140		200.0		70.8	12.1	85.8			
Surr: Phenol-d5	130		200.0		63.4	17.7	65.8			
Surr: 2,4,6-Tribromophenol	140		200.0		71.1	26	138			
Surr: Nitrobenzene-d5	79		100.0		78.9	47.5	119			
Surr: 2-Fluorobiphenyl	78		100.0		77.9	48.1	106			
Surr: 4-Terphenyl-d14	84		100.0		84.3	44	113			

Sample ID	lcsd-15441		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 15441		RunNo: 21456					
Prep Date:	9/23/2014		Analysis Date: 9/25/2014		SeqNo: 627192		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.1	47.9	114	7.78	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.4	51.7	122	18.1	25.9	
2-Chlorophenol	150	10	200.0	0	74.4	40.7	113	11.1	22.5	
1,4-Dichlorobenzene	60	10	100.0	0	60.2	39.6	99.9	9.88	24.6	
2,4-Dinitrotoluene	73	10	100.0	0	73.0	40.8	113	2.28	25.3	
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.5	51.2	111	9.64	23.6	
4-Nitrophenol	110	10	200.0	0	57.4	15.7	86.9	16.9	34.7	
Pentachlorophenol	110	20	200.0	0	55.4	21.6	104	12.6	32.8	
Phenol	110	10	200.0	0	55.3	28.6	71.7	22.1	25.5	
Pyrene	87	10	100.0	0	87.1	54.2	128	3.96	31.4	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.2	40.9	101	8.93	25.9	
Surr: 2-Fluorophenol	110		200.0		54.5	12.1	85.8	0	0	
Surr: Phenol-d5	98		200.0		49.0	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	120		200.0		61.6	26	138	0	0	
Surr: Nitrobenzene-d5	70		100.0		70.4	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		68.9	48.1	106	0	0	

Qualifiers:

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E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A38

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcsd-15441	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	15441	RunNo:	21456					
Prep Date:	9/23/2014	Analysis Date:	9/25/2014	SeqNo:	627192	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	79		100.0		79.2	44	113	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
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J Analyte detected below quantitation limits
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R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

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ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1409A38**

RcptNo: 1

Received by/date:

AT *09/19/14*

Logged By: **Ashley Gallegos**

9/19/2014 12:45:00 PM

AG

Completed By: **Ashley Gallegos**

9/22/2014 10:59:52 AM

AG

Reviewed By:

IMS / mg

09/22/14

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
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: *12.4*
<2 or >12 unless noted

Adjusted? *No*

Checked by: *mg*

Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: Western Refining Company		X Standard ☐ Rush
GALLUP REFINERY		Project Name: 2014 <i>SS</i> 09/22/14
Mailing Address:		2011 ANNUAL GW
2 Giant Crossing Road, Gallup, NM 87301		Project #:
Phone #: 505-722-3833		MW-1,-2,-4,-5
email or Fax#: 505-863-0930		Project Manager:
QA/QC Package:		C. JOHNSON (cheryl.johnson@wnr.com)
☐ Standard ☐ Level 4 (Full Validation)		
Accreditation:		Sampler:
☐ NELAP ☐ Other		On Ice: ☒ Yes ☐ No
☐ EDD (Type)		Sample Temperature: 1.0

Turn-Around Time:

☒ **Standard** ☐ **Rush**

Project Name: 2014 ~~2014~~ 09/22/14
2014 ANNUAL GW

Project #:

MW-1,-2,-4,-5

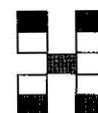
Project Manager:

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

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 10



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hartwelljournal.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks:

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/14	1245	[Signature]	[Signature]	09/19/14	1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

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

October 08, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW

OrderNo.: 1409807

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	2.1	1.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Surr: DNOP	101	59-141		%REC	1	9/17/2014 6:33:53 PM	15341
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	0.51	0.050		mg/L	1	9/18/2014 7:54:49 PM	R21299
Surr: BFB	805	70.9-130	S	%REC	1	9/18/2014 7:54:49 PM	R21299
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	2.4	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Chloride	910	50		mg/L	100	9/19/2014 1:13:37 AM	R21321
Bromide	2.8	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:25:30 PM	R21283
Sulfate	150	10		mg/L	20	9/17/2014 9:37:55 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:19:14 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Calcium	280	10		mg/L	10	9/19/2014 5:36:40 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Iron	11	2.0	*	mg/L	100	9/19/2014 5:38:50 PM	R21336
Magnesium	63	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Manganese	2.4	0.020	*	mg/L	10	9/19/2014 5:36:40 PM	R21336
Potassium	3.5	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:34:57 PM	R21336
Sodium	1100	100		mg/L	100	9/19/2014 5:38:50 PM	R21336
Zinc	0.023	0.010		mg/L	1	9/19/2014 5:34:57 PM	R21336
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.67	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Iron	13	0.40	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Manganese	2.6	0.040	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:00:35 PM	15380
Zinc	0.018	0.010		mg/L	1	9/19/2014 11:43:53 AM	15380
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.13	0.0050	*	mg/L	5	9/29/2014 5:05:34 PM	R21527

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	0.0026	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
Selenium	0.020	0.0050		mg/L	5	9/29/2014 5:05:34 PM	R21527
Uranium	0.015	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.14	0.010	*	mg/L	10	9/29/2014 1:17:32 PM	15380
Lead	0.0042	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
Selenium	0.019	0.010		mg/L	10	9/29/2014 1:17:32 PM	15380
Uranium	0.015	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:00:40 AM	15449
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dimethylphenol	78	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorophenol	31.5	12.1-85.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Phenol-d5	34.8	17.7-65.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2,4,6-Tribromophenol	28.3	26-138		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Nitrobenzene-d5	67.8	47.5-119		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorobiphenyl	64.3	48.1-106		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 4-Terphenyl-d14	50.5	44-113		%REC	1	9/18/2014 11:38:13 PM	15342
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	10	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Toluene	3.1	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Ethylbenzene	4.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methyl tert-butyl ether (MTBE)	41	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trimethylbenzene	9.8	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3,5-Trimethylbenzene	1.2	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1-Methylnaphthalene	13	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 4 of 38
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Isopropylbenzene	1.4	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Propylbenzene	3.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Xylenes, Total	16	1.5		µg/L	1	9/22/2014 1:05:28 PM	R21353
Surr: 1,2-Dichloroethane-d4	82.6	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409807**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Dibromofluoromethane	89.8	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Toluene-d8	76.3	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	6.8	1.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Surr: DNOP	95.6	59-141		%REC	1	9/19/2014 4:38:35 PM	15341
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	0.75	0.050		mg/L	1	9/18/2014 8:24:51 PM	R21299
Surr: BFB	234	70.9-130	S	%REC	1	9/18/2014 8:24:51 PM	R21299
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	1.2	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Chloride	1700	100		mg/L	200	9/19/2014 1:26:02 AM	R21321
Bromide	4.8	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:50:19 PM	R21283
Sulfate	22	2.5		mg/L	5	9/17/2014 9:50:19 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:31:39 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Calcium	170	10		mg/L	10	9/19/2014 5:42:28 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Iron	7.2	0.20	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Magnesium	33	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Manganese	1.8	0.020	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Potassium	6.0	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:40:42 PM	R21336
Sodium	1400	100		mg/L	100	9/19/2014 5:44:27 PM	R21336
Zinc	0.021	0.010		mg/L	1	9/19/2014 5:40:42 PM	R21336
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.72	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Iron	7.9	0.20	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Manganese	1.9	0.020	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:02:20 PM	15380
Zinc	0.021	0.010		mg/L	1	9/19/2014 11:45:32 AM	15380
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 5:14:51 PM	R21527

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	ND	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
Selenium	0.034	0.010		mg/L	10	9/29/2014 5:14:51 PM	R21527
Uranium	0.029	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 1:26:51 PM	15380
Lead	0.0051	0.0010		mg/L	1	9/23/2014 4:21:20 PM	15380
Selenium	0.035	0.010		mg/L	10	9/29/2014 1:26:51 PM	15380
Uranium	0.031	0.0010	*	mg/L	1	9/23/2014 4:21:20 PM	15380
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:02:28 AM	15449
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Acenaphthylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Aniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Azobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzoic acid	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Carbazole	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Chrysene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409807**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dibenzofuran	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dimethylphenol	28	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluorene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachloroethane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Isophorone	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1-Methylnaphthalene	16	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Naphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Nitrobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenanthrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 9 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pyridine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorophenol	53.6	12.1-85.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Phenol-d5	53.1	17.7-65.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2,4,6-Tribromophenol	64.2	26-138		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Nitrobenzene-d5	81.1	47.5-119		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorobiphenyl	75.3	48.1-106		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 4-Terphenyl-d14	66.4	44-113		%REC	1	9/19/2014 12:07:13 AM	15342
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	120	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Toluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Ethylbenzene	13	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methyl tert-butyl ether (MTBE)	320	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Naphthalene	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1-Methylnaphthalene	30	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Methylnaphthalene	ND	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
Acetone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromodichloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromoform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromomethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Butanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon disulfide	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon Tetrachloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloromethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromochloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromomethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,4-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dichlorodifluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2,2-Dichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Hexachlorobutadiene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Hexanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Isopropylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Isopropyltoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Methyl-2-pentanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methylene Chloride	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Butylbenzene	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Propylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
sec-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Styrene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
tert-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichloroethene (TCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichlorofluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Vinyl chloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Xylenes, Total	ND	7.5		µg/L	5	9/22/2014 1:35:03 PM	R21353
Surr: 1,2-Dichloroethane-d4	93.3	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409807**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Dibromofluoromethane	91.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Toluene-d8	86.9	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 12 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 4- 9/12/2014

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:15:00 AM

Lab ID: 1409807-003

Matrix:

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409807**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 4- 9/12/2014

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:15:00 AM

Lab ID: 1409807-003

Matrix:

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 3:04:13 PM	R21353
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: 4-Bromofluorobenzene	97.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Dibromofluoromethane	90.5	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Toluene-d8	90.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409807-004

Matrix: TRIP BLANK

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 8:54:58 PM	R21299
Surr: BFB	87.6	70.9-130		%REC	1	9/18/2014 8:54:58 PM	R21299
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409807-004

Matrix: TRIP BLANK

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 12:06:22 PM	R21353
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Dibromofluoromethane	89.1	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Toluene-d8	95.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Anatek Labs, Inc.

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

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

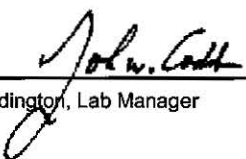
Batch #: 140918053
Project Name: 1409807

Analytical Results Report

Sample Number	140918053-001	Sampling Date	9/12/2014	Date/Time Received	9/18/2014 12:15 PM
Client Sample ID	1409807-002H / OAPIS-1	Sampling Time	8:05 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0908	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Authorized Signature


John Coddington, Lab Manager

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

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

Anatek Labs, Inc.

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

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

Batch #: 140918053
Project Name: 1409807

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.512	mg/L	0.5	102.4	90-110	9/22/2014	9/22/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140918049-002	Cyanide	ND	0.550	mg/L	0.5	110.0	90-110	9/22/2014	9/22/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.521	mg/L	0.5	104.2	5.4	0-20	9/22/2014	9/22/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/22/2014	9/22/2014

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

Comments:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21290			RunNo: 21290					
Prep Date:		Analysis Date: 9/18/2014			SeqNo: 621146		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								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID	LCS		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21290		RunNo: 21290					
Prep Date:			Analysis Date: 9/18/2014		SeqNo: 621147		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21290			RunNo: 21290					
Prep Date:		Analysis Date: 9/18/2014			SeqNo: 621149		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								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID	LCS		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21290		RunNo: 21290					
Prep Date:			Analysis Date: 9/18/2014		SeqNo: 621150		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21290			RunNo: 21290				
Prep Date:			Analysis Date: 9/18/2014			SeqNo: 621150		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID	LCS TEST		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21290		RunNo: 21290					
Prep Date:			Analysis Date: 9/18/2014		SeqNo: 621170		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21336			RunNo: 21336					
Prep Date:		Analysis Date: 9/19/2014			SeqNo: 622776		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21336		RunNo: 21336					
Prep Date:			Analysis Date: 9/19/2014		SeqNo: 622777		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS Ag		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21336			RunNo: 21336				
Prep Date:			Analysis Date: 9/19/2014			SeqNo: 622778		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21336			RunNo: 21336					
Prep Date:		Analysis Date: 9/19/2014			SeqNo: 622779		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21336			RunNo: 21336				
Prep Date:	Analysis Date: 9/19/2014			SeqNo: 622780		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.4	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID	LCS Ag		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21336			RunNo: 21336				
Prep Date:			Analysis Date: 9/19/2014			SeqNo: 622781		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS-15380		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 15380		RunNo: 21318					
Prep Date:	9/18/2014		Analysis Date: 9/19/2014		SeqNo: 622068		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	LCS AG-15380		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 15380		RunNo: 21318					
Prep Date:	9/18/2014		Analysis Date: 9/19/2014		SeqNo: 622069		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID	MB-15380		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 15380		RunNo: 21318					
Prep Date:	9/18/2014		Analysis Date: 9/19/2014		SeqNo: 622074		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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409807-001FMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	GWM-1		Batch ID:	R21493		RunNo:	21493			
Prep Date:			Analysis Date:	9/26/2014		SeqNo:	628583		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	107	70	130			
Uranium	0.045	0.0010	0.02500	0.01458	120	70	130			

Sample ID	1409807-001FMSD		SampType:	MSD		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	GWM-1		Batch ID:	R21493		RunNo:	21493			
Prep Date:			Analysis Date:	9/26/2014		SeqNo:	628584		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	106	70	130	0.912	20	
Uranium	0.045	0.0010	0.02500	0.01458	121	70	130	0.526	20	

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	LCSW		Batch ID:	R21493		RunNo:	21493			
Prep Date:			Analysis Date:	9/26/2014		SeqNo:	628608		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.024	0.0010	0.02500	0	95.1	85	115			

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	LCSW		Batch ID:	R21493		RunNo:	21493			
Prep Date:			Analysis Date:	9/26/2014		SeqNo:	628609		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	92.6	85	115			
Uranium	0.023	0.0010	0.02500	0	91.6	85	115			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	PBW		Batch ID:	R21493		RunNo:	21493			
Prep Date:			Analysis Date:	9/26/2014		SeqNo:	628610		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	PBW		Batch ID:	R21493		RunNo:	21493			
Prep Date:			Analysis Date:	9/26/2014		SeqNo:	628611		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 |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628611		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID 1409807-001FMS	SampType: MS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: GWM-1	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629862		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	88.3	70	130			

Sample ID 1409807-001FMSD	SampType: MSD		TestCode: EPA 200.8: Dissolved Metals							
Client ID: GWM-1	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629863		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	90.8	70	130	2.44	20	

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629894		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.6	85	115			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629895		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629896		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup**Project:** 2014 Annual GW

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID:	PBW	Batch ID: R21527			RunNo: 21527						
Prep Date:		Analysis Date: 9/29/2014			SeqNo: 629897		Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LLLCS-15380		SampType: LCSLL		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	BatchQC		Batch ID: 15380		RunNo: 21376					
Prep Date:	9/18/2014		Analysis Date: 9/23/2014		SeqNo: 624956		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID	MB-15380		SampType: MBLK		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	PBW		Batch ID: 15380		RunNo: 21376					
Prep Date:	9/18/2014		Analysis Date: 9/23/2014		SeqNo: 624959		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15449	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	15449	RunNo:	21410					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	625480	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-15449	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	15449	RunNo:	21410					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	625481	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21283	RunNo:	21283					
Prep Date:		Analysis Date:	9/17/2014	SeqNo:	621017	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21283	RunNo:	21283					
Prep Date:		Analysis Date:	9/17/2014	SeqNo:	621018	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21321	RunNo:	21321					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	622134	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:	R21321	RunNo:	21321					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	622135	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15341		SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	PBW		Batch ID: 15341		RunNo: 21248					
Prep Date:	9/17/2014		Analysis Date: 9/17/2014		SeqNo: 619741		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	59	141			

Sample ID	LCS-15341		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	LCSW		Batch ID: 15341		RunNo: 21248					
Prep Date:	9/17/2014		Analysis Date: 9/17/2014		SeqNo: 619742		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	69.7	142			
Surr: DNOP	0.52		0.5000		105	59	141			

Sample ID	1409807-001CMS		SampType: MS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	GWM-1		Batch ID: 15341		RunNo: 21248					
Prep Date:	9/17/2014		Analysis Date: 9/17/2014		SeqNo: 620447		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.2	1.0	5.000	2.084	123	55	159			
Surr: DNOP	0.53		0.5000		105	59	141			

Sample ID	1409807-001CMSD		SampType: MSD		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	GWM-1		Batch ID: 15341		RunNo: 21248					
Prep Date:	9/17/2014		Analysis Date: 9/17/2014		SeqNo: 620448		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.1	1.0	5.000	2.084	120	55	159	1.79	20	
Surr: DNOP	0.53		0.5000		105	59	141	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	R21299	RunNo:	21299					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	621575	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.8	70.9	130			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	R21299	RunNo:	21299					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	624430	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.7	80	120			
Surr: BFB	20		20.00		101	70.9	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21353			RunNo: 21353					
Prep Date:		Analysis Date: 9/22/2014			SeqNo: 623590		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R21353	RunNo:	21353					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623590	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.9	70	130			
Surr: Toluene-d8	9.2		10.00		91.7	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R21353	RunNo:	21353					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623592	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.7	70	130			
Toluene	19	1.0	20.00	0	93.1	80	120			
Chlorobenzene	19	1.0	20.00	0	95.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	100ng lcs		SampType: LCS		TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW		Batch ID: R21353		RunNo: 21353					
Prep Date:			Analysis Date: 9/22/2014		SeqNo: 623592		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	83.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID	b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21353			RunNo: 21353					
Prep Date:		Analysis Date: 9/22/2014			SeqNo: 623718		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	b3	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R21353	RunNo:	21353					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623718	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R21353			RunNo: 21353						
Prep Date:	Analysis Date: 9/22/2014			SeqNo: 623718		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R21353			RunNo: 21353						
Prep Date:	Analysis Date: 9/22/2014			SeqNo: 623720		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	18	1.0	20.00	0	91.1	80	120			
Chlorobenzene	19	1.0	20.00	0	94.0	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	125	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Sample ID 1409807-002a ms	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: OAPIS-1	Batch ID: R21353			RunNo: 21388						
Prep Date:	Analysis Date: 9/23/2014			SeqNo: 624745		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.6	70	130			
Toluene	86	5.0	100.0	1.670	84.5	70	130			
Chlorobenzene	82	5.0	100.0	0.8700	81.0	70	130			
1,1-Dichloroethene	95	5.0	100.0	0	95.0	70	130			
Trichloroethene (TCE)	72	5.0	100.0	0	72.4	70	130			
Surr: 1,2-Dichloroethane-d4	44		50.00		87.5	70	130			
Surr: 4-Bromofluorobenzene	56		50.00		112	70	130			
Surr: Dibromofluoromethane	43		50.00		86.7	70	130			
Surr: Toluene-d8	47		50.00		94.5	70	130			

Sample ID 1409807-002a msd	SampType: MSD			TestCode: EPA Method 8260B: VOLATILES						
Client ID: OAPIS-1	Batch ID: R21353			RunNo: 21388						
Prep Date:	Analysis Date: 9/23/2014			SeqNo: 624746		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.8	70	130	0.0730	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409807-002a msd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	OAPIS-1	Batch ID: R21353		RunNo: 21388						
Prep Date:		Analysis Date: 9/23/2014		SeqNo: 624746		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	94	5.0	100.0	1.670	91.9	70	130	8.28	20	
Chlorobenzene	85	5.0	100.0	0.8700	84.3	70	130	3.93	20	
1,1-Dichloroethene	100	5.0	100.0	0	104	70	130	8.78	20	
Trichloroethene (TCE)	77	5.0	100.0	0	77.4	70	130	6.60	20	
Surr: 1,2-Dichloroethane-d4	46		50.00		91.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	58		50.00		116	70	130	0	0	
Surr: Dibromofluoromethane	45		50.00		89.8	70	130	0	0	
Surr: Toluene-d8	47		50.00		94.0	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15342	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15342	RunNo:	21301					
Prep Date:	9/17/2014	Analysis Date:	9/18/2014	SeqNo:	621609	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	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15342	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15342	RunNo:	21301					
Prep Date:	9/17/2014	Analysis Date:	9/18/2014	SeqNo:	621609	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
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	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcs-15342		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 15342		RunNo: 21301					
Prep Date:	9/17/2014		Analysis Date: 9/18/2014		SeqNo: 621610		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID	lcsd-15342		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 15342		RunNo: 21301					
Prep Date:	9/17/2014		Analysis Date: 9/18/2014		SeqNo: 621611		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	R
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcsd-15342	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	15342	RunNo:	21301					
Prep Date:	9/17/2014	Analysis Date:	9/18/2014	SeqNo:	621611	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1409807**

RcptNo: 1

Received by/date:	<u>OS</u>	<u>09/16/14</u>
Logged By:	Ashley Gallegos	9/16/2014 5:03:00 PM
Completed By:	Ashley Gallegos	9/17/2014 8:13:28 AM
Reviewed By:	<u>AS 09/17/14</u>	

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 ☐
- For Metals analysis: Added 1mL HNO₃ to -COIG for acceptable pH. Held in login for 24 hours.*
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
(<2 or >12 unless noted)
Adjusted? yes
Checked by: mg

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			



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

October 08, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW

OrderNo.: 1409807

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	2.1	1.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Surr: DNOP	101	59-141		%REC	1	9/17/2014 6:33:53 PM	15341
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	0.51	0.050		mg/L	1	9/18/2014 7:54:49 PM	R21299
Surr: BFB	805	70.9-130	S	%REC	1	9/18/2014 7:54:49 PM	R21299
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	2.4	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Chloride	910	50		mg/L	100	9/19/2014 1:13:37 AM	R21321
Bromide	2.8	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:25:30 PM	R21283
Sulfate	150	10		mg/L	20	9/17/2014 9:37:55 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:19:14 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Calcium	280	10		mg/L	10	9/19/2014 5:36:40 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Iron	11	2.0	*	mg/L	100	9/19/2014 5:38:50 PM	R21336
Magnesium	63	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Manganese	2.4	0.020	*	mg/L	10	9/19/2014 5:36:40 PM	R21336
Potassium	3.5	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:34:57 PM	R21336
Sodium	1100	100		mg/L	100	9/19/2014 5:38:50 PM	R21336
Zinc	0.023	0.010		mg/L	1	9/19/2014 5:34:57 PM	R21336
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.67	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Iron	13	0.40	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Manganese	2.6	0.040	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:00:35 PM	15380
Zinc	0.018	0.010		mg/L	1	9/19/2014 11:43:53 AM	15380
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.13	0.0050	*	mg/L	5	9/29/2014 5:05:34 PM	R21527

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	0.0026	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
Selenium	0.020	0.0050		mg/L	5	9/29/2014 5:05:34 PM	R21527
Uranium	0.015	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.14	0.010	*	mg/L	10	9/29/2014 1:17:32 PM	15380
Lead	0.0042	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
Selenium	0.019	0.010		mg/L	10	9/29/2014 1:17:32 PM	15380
Uranium	0.015	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:00:40 AM	15449
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342

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

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	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dimethylphenol	78	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorophenol	31.5	12.1-85.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Phenol-d5	34.8	17.7-65.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2,4,6-Tribromophenol	28.3	26-138		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Nitrobenzene-d5	67.8	47.5-119		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorobiphenyl	64.3	48.1-106		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 4-Terphenyl-d14	50.5	44-113		%REC	1	9/18/2014 11:38:13 PM	15342
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	10	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Toluene	3.1	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Ethylbenzene	4.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methyl tert-butyl ether (MTBE)	41	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trimethylbenzene	9.8	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3,5-Trimethylbenzene	1.2	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1-Methylnaphthalene	13	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GW-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Isopropylbenzene	1.4	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Propylbenzene	3.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Xylenes, Total	16	1.5		µg/L	1	9/22/2014 1:05:28 PM	R21353
Surr: 1,2-Dichloroethane-d4	82.6	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409807**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 7:50:00 AM

Lab ID: 1409807-001

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Dibromofluoromethane	89.8	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Toluene-d8	76.3	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	6.8	1.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Surr: DNOP	95.6	59-141		%REC	1	9/19/2014 4:38:35 PM	15341
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	0.75	0.050		mg/L	1	9/18/2014 8:24:51 PM	R21299
Surr: BFB	234	70.9-130	S	%REC	1	9/18/2014 8:24:51 PM	R21299
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	1.2	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Chloride	1700	100		mg/L	200	9/19/2014 1:26:02 AM	R21321
Bromide	4.8	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:50:19 PM	R21283
Sulfate	22	2.5		mg/L	5	9/17/2014 9:50:19 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:31:39 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Calcium	170	10		mg/L	10	9/19/2014 5:42:28 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Iron	7.2	0.20	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Magnesium	33	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Manganese	1.8	0.020	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Potassium	6.0	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:40:42 PM	R21336
Sodium	1400	100		mg/L	100	9/19/2014 5:44:27 PM	R21336
Zinc	0.021	0.010		mg/L	1	9/19/2014 5:40:42 PM	R21336
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.72	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Iron	7.9	0.20	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Manganese	1.9	0.020	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:02:20 PM	15380
Zinc	0.021	0.010		mg/L	1	9/19/2014 11:45:32 AM	15380
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 5:14:51 PM	R21527

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	ND	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
Selenium	0.034	0.010		mg/L	10	9/29/2014 5:14:51 PM	R21527
Uranium	0.029	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 1:26:51 PM	15380
Lead	0.0051	0.0010		mg/L	1	9/23/2014 4:21:20 PM	15380
Selenium	0.035	0.010		mg/L	10	9/29/2014 1:26:51 PM	15380
Uranium	0.031	0.0010	*	mg/L	1	9/23/2014 4:21:20 PM	15380
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:02:28 AM	15449
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Acenaphthylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Aniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Azobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzoic acid	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Carbazole	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Chrysene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 8 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dibenzofuran	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dimethylphenol	28	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluorene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachloroethane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Isophorone	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1-Methylnaphthalene	16	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Naphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Nitrobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenanthrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 9 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pyridine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorophenol	53.6	12.1-85.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Phenol-d5	53.1	17.7-65.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2,4,6-Tribromophenol	64.2	26-138		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Nitrobenzene-d5	81.1	47.5-119		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorobiphenyl	75.3	48.1-106		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 4-Terphenyl-d14	66.4	44-113		%REC	1	9/19/2014 12:07:13 AM	15342
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	120	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Toluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Ethylbenzene	13	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methyl tert-butyl ether (MTBE)	320	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Naphthalene	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1-Methylnaphthalene	30	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Methylnaphthalene	ND	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
Acetone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromodichloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromoform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromomethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Butanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon disulfide	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon Tetrachloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloromethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromochloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromomethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,4-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dichlorodifluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2,2-Dichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Hexachlorobutadiene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Hexanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Isopropylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Isopropyltoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Methyl-2-pentanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methylene Chloride	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Butylbenzene	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Propylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
sec-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Styrene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
tert-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichloroethene (TCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichlorofluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Vinyl chloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Xylenes, Total	ND	7.5		µg/L	5	9/22/2014 1:35:03 PM	R21353
Surr: 1,2-Dichloroethane-d4	93.3	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409807**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OAPIS-1

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:05:00 AM

Lab ID: 1409807-002

Matrix: AQUEOUS

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Dibromofluoromethane	91.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Toluene-d8	86.9	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 12 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 4- 9/12/2014

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:15:00 AM

Lab ID: 1409807-003

Matrix:

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 13 of 38
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409807**

Date Reported: **10/8/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 4- 9/12/2014

Project: 2014 Annual GW

Collection Date: 9/12/2014 8:15:00 AM

Lab ID: 1409807-003

Matrix:

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 3:04:13 PM	R21353
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: 4-Bromofluorobenzene	97.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Dibromofluoromethane	90.5	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Toluene-d8	90.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409807-004

Matrix: TRIP BLANK

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 8:54:58 PM	R21299
Surr: BFB	87.6	70.9-130		%REC	1	9/18/2014 8:54:58 PM	R21299
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409807

Date Reported: 10/8/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409807-004

Matrix: TRIP BLANK

Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 12:06:22 PM	R21353
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Dibromofluoromethane	89.1	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Toluene-d8	95.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Anatek Labs, Inc.

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

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

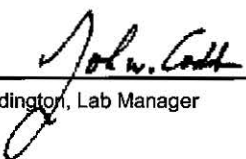
Batch #: 140918053
Project Name: 1409807

Analytical Results Report

Sample Number	140918053-001	Sampling Date	9/12/2014	Date/Time Received	9/18/2014 12:15 PM
Client Sample ID	1409807-002H / OAPIS-1	Sampling Time	8:05 AM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0908	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Authorized Signature


John Coddington, Lab Manager

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

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

Anatek Labs, Inc.

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

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

Batch #: 140918053
Project Name: 1409807

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.512	mg/L	0.5	102.4	90-110	9/22/2014	9/22/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140918049-002	Cyanide	ND	0.550	mg/L	0.5	110.0	90-110	9/22/2014	9/22/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.521	mg/L	0.5	104.2	5.4	0-20	9/22/2014	9/22/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/22/2014	9/22/2014

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

Comments:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21290			RunNo: 21290					
Prep Date:		Analysis Date: 9/18/2014			SeqNo: 621146		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								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID	LCS		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21290		RunNo: 21290					
Prep Date:			Analysis Date: 9/18/2014		SeqNo: 621147		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21290			RunNo: 21290					
Prep Date:		Analysis Date: 9/18/2014			SeqNo: 621149		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								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID	LCS		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21290		RunNo: 21290					
Prep Date:			Analysis Date: 9/18/2014		SeqNo: 621150		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21290			RunNo: 21290				
Prep Date:			Analysis Date: 9/18/2014			SeqNo: 621150		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID	LCS TEST		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21290		RunNo: 21290					
Prep Date:			Analysis Date: 9/18/2014		SeqNo: 621170		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21336			RunNo: 21336					
Prep Date:		Analysis Date: 9/19/2014			SeqNo: 622776		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21336			RunNo: 21336				
Prep Date:	Analysis Date: 9/19/2014			SeqNo: 622777		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS Ag		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21336			RunNo: 21336				
Prep Date:			Analysis Date: 9/19/2014			SeqNo: 622778		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21336			RunNo: 21336					
Prep Date:		Analysis Date: 9/19/2014			SeqNo: 622779		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	LCS		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21336			RunNo: 21336				
Prep Date:	Analysis Date: 9/19/2014			SeqNo: 622780		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.4	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID	LCS Ag		SampType: LCS			TestCode: EPA Method 200.7: Dissolved Metals				
Client ID:	LCSW		Batch ID: R21336			RunNo: 21336				
Prep Date:			Analysis Date: 9/19/2014			SeqNo: 622781		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LCS-15380		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 15380		RunNo: 21318					
Prep Date:	9/18/2014		Analysis Date: 9/19/2014		SeqNo: 622068		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	LCS AG-15380		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 15380		RunNo: 21318					
Prep Date:	9/18/2014		Analysis Date: 9/19/2014		SeqNo: 622069		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID	MB-15380	SampType: MBLK			TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID: 15380			RunNo: 21318					
Prep Date:	9/18/2014	Analysis Date: 9/19/2014			SeqNo: 622074		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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID 1409807-001FMS	SampType: MS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: GWM-1	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628583		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	107	70	130			
Uranium	0.045	0.0010	0.02500	0.01458	120	70	130			

Sample ID 1409807-001FMSD	SampType: MSD		TestCode: EPA 200.8: Dissolved Metals							
Client ID: GWM-1	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628584		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	106	70	130	0.912	20	
Uranium	0.045	0.0010	0.02500	0.01458	121	70	130	0.526	20	

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628608		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.024	0.0010	0.02500	0	95.1	85	115			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628609		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	92.6	85	115			
Uranium	0.023	0.0010	0.02500	0	91.6	85	115			

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628610		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628611		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 |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: R21493		RunNo: 21493							
Prep Date:	Analysis Date: 9/26/2014		SeqNo: 628611		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID 1409807-001FMS	SampType: MS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: GWM-1	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629862		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	88.3	70	130			

Sample ID 1409807-001FMSD	SampType: MSD		TestCode: EPA 200.8: Dissolved Metals							
Client ID: GWM-1	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629863		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	90.8	70	130	2.44	20	

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629894		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.6	85	115			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629895		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: R21527		RunNo: 21527							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629896		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup**Project:** 2014 Annual GW

Sample ID	MB	SampType: MBLK			TestCode: EPA 200.8: Dissolved Metals						
Client ID:	PBW	Batch ID: R21527			RunNo: 21527						
Prep Date:		Analysis Date: 9/29/2014			SeqNo: 629897		Units: mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	LLLCS-15380		SampType: LCSLL		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	BatchQC		Batch ID: 15380		RunNo: 21376					
Prep Date:	9/18/2014		Analysis Date: 9/23/2014		SeqNo: 624956		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID	MB-15380		SampType: MBLK		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	PBW		Batch ID: 15380		RunNo: 21376					
Prep Date:	9/18/2014		Analysis Date: 9/23/2014		SeqNo: 624959		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15449	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	15449	RunNo:	21410					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	625480	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-15449	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	15449	RunNo:	21410					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	625481	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21283	RunNo:	21283					
Prep Date:		Analysis Date:	9/17/2014	SeqNo:	621017	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21283	RunNo:	21283					
Prep Date:		Analysis Date:	9/17/2014	SeqNo:	621018	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21321	RunNo:	21321					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	622134	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:	R21321	RunNo:	21321					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	622135	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15341	SampType: MBLK			TestCode: EPA Method 8015D: Diesel Range					
Client ID:	PBW	Batch ID: 15341			RunNo: 21248					
Prep Date:	9/17/2014	Analysis Date: 9/17/2014			SeqNo: 619741		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	59	141			

Sample ID	LCS-15341		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	LCSW		Batch ID: 15341		RunNo: 21248					
Prep Date:	9/17/2014		Analysis Date: 9/17/2014		SeqNo: 619742		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	69.7	142			
Surr: DNOP	0.52		0.5000		105	59	141			

Sample ID	1409807-001CMS		SampType: MS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	GWM-1		Batch ID: 15341		RunNo: 21248					
Prep Date:	9/17/2014		Analysis Date: 9/17/2014		SeqNo: 620447		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.2	1.0	5.000	2.084	123	55	159			
Surr: DNOP	0.53		0.5000		105	59	141			

Sample ID	1409807-001CMSD		SampType: MSD		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	GWM-1		Batch ID: 15341		RunNo: 21248					
Prep Date:	9/17/2014		Analysis Date: 9/17/2014		SeqNo: 620448		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.1	1.0	5.000	2.084	120	55	159	1.79	20	
Surr: DNOP	0.53		0.5000		105	59	141	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBW	Batch ID:	R21299	RunNo:	21299					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	621575	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.8	70.9	130			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	R21299	RunNo:	21299					
Prep Date:		Analysis Date:	9/18/2014	SeqNo:	624430	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.7	80	120			
Surr: BFB	20		20.00		101	70.9	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21353			RunNo: 21353					
Prep Date:		Analysis Date: 9/22/2014			SeqNo: 623590		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R21353	RunNo:	21353					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623590	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.9	70	130			
Surr: Toluene-d8	9.2		10.00		91.7	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R21353	RunNo:	21353					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623592	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.7	70	130			
Toluene	19	1.0	20.00	0	93.1	80	120			
Chlorobenzene	19	1.0	20.00	0	95.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	100ng lcs		SampType: LCS			TestCode: EPA Method 8260B: VOLATILES				
Client ID:	LCSW		Batch ID: R21353			RunNo: 21353				
Prep Date:	Analysis Date: 9/22/2014			SeqNo: 623592		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	83.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID	b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21353			RunNo: 21353					
Prep Date:		Analysis Date: 9/22/2014			SeqNo: 623718		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	b3	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R21353	RunNo:	21353					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623718	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R21353			RunNo: 21353						
Prep Date:	Analysis Date: 9/22/2014			SeqNo: 623718		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID 100ng lcs2	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R21353			RunNo: 21353						
Prep Date:	Analysis Date: 9/22/2014			SeqNo: 623720		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	18	1.0	20.00	0	91.1	80	120			
Chlorobenzene	19	1.0	20.00	0	94.0	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	125	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Sample ID 1409807-002a ms	SampType: MS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: OAPIS-1	Batch ID: R21353			RunNo: 21388						
Prep Date:	Analysis Date: 9/23/2014			SeqNo: 624745		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.6	70	130			
Toluene	86	5.0	100.0	1.670	84.5	70	130			
Chlorobenzene	82	5.0	100.0	0.8700	81.0	70	130			
1,1-Dichloroethene	95	5.0	100.0	0	95.0	70	130			
Trichloroethene (TCE)	72	5.0	100.0	0	72.4	70	130			
Surr: 1,2-Dichloroethane-d4	44		50.00		87.5	70	130			
Surr: 4-Bromofluorobenzene	56		50.00		112	70	130			
Surr: Dibromofluoromethane	43		50.00		86.7	70	130			
Surr: Toluene-d8	47		50.00		94.5	70	130			

Sample ID 1409807-002a msd	SampType: MSD			TestCode: EPA Method 8260B: VOLATILES						
Client ID: OAPIS-1	Batch ID: R21353			RunNo: 21388						
Prep Date:	Analysis Date: 9/23/2014			SeqNo: 624746		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.8	70	130	0.0730	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409807-002a msd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	OAPIS-1	Batch ID: R21353		RunNo: 21388						
Prep Date:		Analysis Date: 9/23/2014		SeqNo: 624746		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	94	5.0	100.0	1.670	91.9	70	130	8.28	20	
Chlorobenzene	85	5.0	100.0	0.8700	84.3	70	130	3.93	20	
1,1-Dichloroethene	100	5.0	100.0	0	104	70	130	8.78	20	
Trichloroethene (TCE)	77	5.0	100.0	0	77.4	70	130	6.60	20	
Surr: 1,2-Dichloroethane-d4	46		50.00		91.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	58		50.00		116	70	130	0	0	
Surr: Dibromofluoromethane	45		50.00		89.8	70	130	0	0	
Surr: Toluene-d8	47		50.00		94.0	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15342		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 15342		RunNo: 21301					
Prep Date:	9/17/2014		Analysis Date: 9/18/2014		SeqNo: 621609		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	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15342	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15342	RunNo:	21301					
Prep Date:	9/17/2014	Analysis Date:	9/18/2014	SeqNo:	621609	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
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	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcs-15342		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 15342		RunNo: 21301					
Prep Date:	9/17/2014		Analysis Date: 9/18/2014		SeqNo: 621610		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID	lcsd-15342		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 15342		RunNo: 21301					
Prep Date:	9/17/2014		Analysis Date: 9/18/2014		SeqNo: 621611		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	R
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409807

08-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcsd-15342	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	15342	RunNo:	21301					
Prep Date:	9/17/2014	Analysis Date:	9/18/2014	SeqNo:	621611	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1409807**

RcptNo: 1

Received by/date:	<u>OS</u>	<u>09/16/14</u>
Logged By:	Ashley Gallegos	9/16/2014 5:03:00 PM
Completed By:	Ashley Gallegos	9/17/2014 8:13:28 AM
Reviewed By:	<u>AS 09/17/14</u>	

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 ☐
- For Metals analysis: Added 1mL HNO₃ to -COIG for acceptable pH. Held in login for 24 hours.*
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
(<2 or >12 unless noted)
Adjusted? yes
Checked by: mg

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			



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

November 25, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Hydrocarbon Seep

OrderNo.: 1411731

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/18/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-43

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 8:20:00 AM

Lab ID: 1411731-001

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/19/2014 6:49:23 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 6:49:23 PM	16462
Surr: DNOP	103	59-141		%REC	1	11/19/2014 6:49:23 PM	16462
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/19/2014 6:37:43 PM	R22638
Surr: BFB	92.3	80-120		%REC	1	11/19/2014 6:37:43 PM	R22638
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 1 of 30
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-43

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 8:20:00 AM

Lab ID: 1411731-001

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3,3'-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-43

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 8:20:00 AM

Lab ID: 1411731-001

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Surr: 2-Fluorophenol	30.5	17.6-104		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: Phenol-d5	29.8	17.7-89.9		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 2,4,6-Tribromophenol	30.6	16.3-122		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: Nitrobenzene-d5	81.1	45.3-117		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 2-Fluorobiphenyl	74.3	43-113		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 4-Terphenyl-d14	80.8	47.6-122		%REC	1	11/20/2014 3:43:36 PM	16481
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Toluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Naphthalene	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Acetone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromoform	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromomethane	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Butanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Carbon disulfide	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloroethane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloroform	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloromethane	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-43

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 8:20:00 AM

Lab ID: 1411731-001

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Hexanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Isopropyltoluene	3.6	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Styrene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/22/2014 7:34:21 AM	R22714
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: Dibromofluoromethane	104	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: Toluene-d8	100	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:00:00 AM

Lab ID: 1411731-002

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	44	1.0		mg/L	1	11/19/2014 7:10:32 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:10:32 PM	16462
Surr: DNOP	97.2	59-141		%REC	1	11/19/2014 7:10:32 PM	16462
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	11/21/2014 12:06:22 PM	R22716
Surr: BFB	87.0	80-120		%REC	10	11/21/2014 12:06:22 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-ethylhexyl)phthalate	13	10	B	µg/L	1	11/20/2014 5:07:01 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:00:00 AM

Lab ID: 1411731-002

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3,3'-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1-Methylnaphthalene	72	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:00:00 AM

Lab ID: 1411731-002

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Surr: 2-Fluorophenol	68.9	17.6-104		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: Phenol-d5	53.9	17.7-89.9		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 2,4,6-Tribromophenol	1.72	16.3-122	S	%REC	1	11/20/2014 5:07:01 PM	16481
Surr: Nitrobenzene-d5	80.1	45.3-117		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 2-Fluorobiphenyl	61.3	43-113		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 4-Terphenyl-d14	78.6	47.6-122		%REC	1	11/20/2014 5:07:01 PM	16481
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	12	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Toluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Ethylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,4-Trimethylbenzene	27	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Naphthalene	35	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
1-Methylnaphthalene	73	40		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Methylnaphthalene	58	40		µg/L	10	11/22/2014 8:00:58 AM	R22714
Acetone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromodichloromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromoform	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromomethane	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Butanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Carbon disulfide	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Carbon Tetrachloride	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloroethane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloroform	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloromethane	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Chlorotoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Chlorotoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
cis-1,2-DCE	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dibromochloromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dibromomethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 7 of 30
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-42

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:00:00 AM

Lab ID: 1411731-002

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
1,3-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,4-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dichlorodifluoromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloroethene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichloropropane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,3-Dichloropropane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
2,2-Dichloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Hexachlorobutadiene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Hexanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Isopropylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Isopropyltoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Methyl-2-pentanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Methylene Chloride	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
n-Butylbenzene	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
n-Propylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
sec-Butylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Styrene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
tert-Butylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
trans-1,2-DCE	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,1-Trichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,2-Trichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Trichloroethene (TCE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Trichlorofluoromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,3-Trichloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Vinyl chloride	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Xylenes, Total	56	15		µg/L	10	11/22/2014 8:00:58 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: 4-Bromofluorobenzene	92.7	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: Dibromofluoromethane	96.0	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: Toluene-d8	101	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-41

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:45:00 AM

Lab ID: 1411731-003

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/19/2014 7:31:35 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:31:35 PM	16462
Surr: DNOP	132	59-141		%REC	1	11/19/2014 7:31:35 PM	16462
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/19/2014 7:32:53 PM	R22638
Surr: BFB	88.3	80-120		%REC	1	11/19/2014 7:32:53 PM	R22638
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-ethylhexyl)phthalate	14	10	B	µg/L	1	11/20/2014 4:11:28 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-41

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:45:00 AM

Lab ID: 1411731-003

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3,3'-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-41

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:45:00 AM

Lab ID: 1411731-003

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Surr: 2-Fluorophenol	73.1	17.6-104		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: Phenol-d5	57.2	17.7-89.9		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 2,4,6-Tribromophenol	81.0	16.3-122		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: Nitrobenzene-d5	81.4	45.3-117		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 2-Fluorobiphenyl	77.9	43-113		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 4-Terphenyl-d14	94.4	47.6-122		%REC	1	11/20/2014 4:11:28 PM	16481
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Toluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichloroethane (EDC)	2.0	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Naphthalene	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Acetone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromoform	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromomethane	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Butanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Carbon disulfide	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloroethane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloroform	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloromethane	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-41

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 9:45:00 AM

Lab ID: 1411731-003

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloroethane	3.6	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloroethene	3.8	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Hexanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Styrene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/22/2014 8:27:44 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: Dibromofluoromethane	90.9	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: Toluene-d8	103	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-39

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 11:15:00 AM

Lab ID: 1411731-004

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	15	1.0		mg/L	1	11/19/2014 7:52:48 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:52:48 PM	16462
Surr: DNOP	107	59-141		%REC	1	11/19/2014 7:52:48 PM	16462
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	0.39	0.25		mg/L	5	11/21/2014 3:17:45 PM	R22716
Surr: BFB	109	80-120		%REC	5	11/21/2014 3:17:45 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-ethylhexyl)phthalate	12	10	B	µg/L	1	11/20/2014 4:39:15 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Carbazole	21	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.
	E Value above quantitation range
	J Analyte detected below quantitation limits
	O RSD is greater than RSDlimit
	R RPD outside accepted recovery limits
	S Spike Recovery outside accepted recovery limits

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-39

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 11:15:00 AM

Lab ID: 1411731-004

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3,3'-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1-Methylnaphthalene	79	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-39

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 11:15:00 AM

Lab ID: 1411731-004

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Surr: 2-Fluorophenol	69.4	17.6-104		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: Phenol-d5	57.4	17.7-89.9		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 2,4,6-Tribromophenol	83.7	16.3-122		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: Nitrobenzene-d5	83.3	45.3-117		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 2-Fluorobiphenyl	75.4	43-113		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 4-Terphenyl-d14	71.9	47.6-122		%REC	1	11/20/2014 4:39:15 PM	16481
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	20	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Toluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Ethylbenzene	60	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,4-Trimethylbenzene	43	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Naphthalene	120	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
1-Methylnaphthalene	170	20		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Methylnaphthalene	130	20		µg/L	5	11/22/2014 8:54:27 AM	R22714
Acetone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromodichloromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromoform	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromomethane	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Butanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Carbon disulfide	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Carbon Tetrachloride	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloroethane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloroform	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloromethane	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
cis-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dibromochloromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dibromomethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-39

Project: Hydrocarbon Seep

Collection Date: 11/18/2014 11:15:00 AM

Lab ID: 1411731-004

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloroethene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,3-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
2,2-Dichloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Hexachlorobutadiene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Hexanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Isopropylbenzene	15	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Isopropyltoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Methyl-2-pentanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Methylene Chloride	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
n-Butylbenzene	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
n-Propylbenzene	19	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
sec-Butylbenzene	5.5	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Styrene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
tert-Butylbenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
trans-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Trichlorofluoromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,3-Trichloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Vinyl chloride	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Xylenes, Total	ND	7.5		µg/L	5	11/22/2014 8:54:27 AM	R22714
Surr: 1,2-Dichloroethane-d4	97.3	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: 4-Bromofluorobenzene	89.3	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: Dibromofluoromethane	99.0	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: Toluene-d8	106	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Duplicate 01

Project: Hydrocarbon Seep

Collection Date: 11/18/2014

Lab ID: 1411731-005

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	50	1.0		mg/L	1	11/19/2014 8:35:04 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 8:35:04 PM	16462
Surr: DNOP	105	59-141		%REC	1	11/19/2014 8:35:04 PM	16462
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	11/21/2014 3:45:06 PM	R22716
Surr: BFB	89.5	80-120		%REC	10	11/21/2014 3:45:06 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-ethylhexyl)phthalate	11	10	B	µg/L	1	11/20/2014 6:02:10 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Duplicate 01

Project: Hydrocarbon Seep

Collection Date: 11/18/2014

Lab ID: 1411731-005

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3,3'-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1-Methylnaphthalene	83	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Duplicate 01

Project: Hydrocarbon Seep

Collection Date: 11/18/2014

Lab ID: 1411731-005

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Surr: 2-Fluorophenol	45.6	17.6-104		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: Phenol-d5	41.5	17.7-89.9		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 2,4,6-Tribromophenol	2.22	16.3-122	S	%REC	1	11/20/2014 6:02:10 PM	16481
Surr: Nitrobenzene-d5	55.0	45.3-117		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 2-Fluorobiphenyl	48.4	43-113		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 4-Terphenyl-d14	62.4	47.6-122		%REC	1	11/20/2014 6:02:10 PM	16481
EPA METHOD 8260B: VOLATILES							Analyst: cadg
Benzene	11	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Toluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Ethylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,4-Trimethylbenzene	27	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Naphthalene	36	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
1-Methylnaphthalene	80	40		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Methylnaphthalene	63	40		µg/L	10	11/22/2014 9:21:14 AM	R22714
Acetone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromodichloromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromoform	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromomethane	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Butanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Carbon disulfide	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Carbon Tetrachloride	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloroethane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloroform	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloromethane	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Chlorotoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Chlorotoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
cis-1,2-DCE	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dibromochloromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dibromomethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411731

Date Reported: 11/25/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Duplicate 01

Project: Hydrocarbon Seep

Collection Date: 11/18/2014

Lab ID: 1411731-005

Matrix: AQUEOUS

Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: cadg
1,3-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,4-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dichlorodifluoromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloroethene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichloropropane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,3-Dichloropropane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
2,2-Dichloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Hexachlorobutadiene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Hexanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Isopropylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Isopropyltoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Methyl-2-pentanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Methylene Chloride	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
n-Butylbenzene	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
n-Propylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
sec-Butylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Styrene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
tert-Butylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
trans-1,2-DCE	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,1-Trichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,2-Trichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Trichloroethene (TCE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Trichlorofluoromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,3-Trichloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Vinyl chloride	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Xylenes, Total	54	15		µg/L	10	11/22/2014 9:21:14 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: 4-Bromofluorobenzene	95.3	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: Dibromofluoromethane	91.9	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: Toluene-d8	99.7	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	LCS-16462		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	LCSW		Batch ID: 16462		RunNo: 22625					
Prep Date:	11/19/2014		Analysis Date: 11/19/2014		SeqNo: 667726		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	114	69.7	142			
Surr: DNOP	0.61		0.5000		123	59	141			

Sample ID	MB-16462		SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	PBW		Batch ID: 16462		RunNo: 22625					
Prep Date:	11/19/2014		Analysis Date: 11/19/2014		SeqNo: 668220		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		105	59	141			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID 5ML RB	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBW	Batch ID: R22638		RunNo: 22638							
Prep Date:	Analysis Date: 11/19/2014		SeqNo: 668015		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	17		20.00		84.5	80	120			

Sample ID 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSW	Batch ID: R22638		RunNo: 22638							
Prep Date:	Analysis Date: 11/19/2014		SeqNo: 668016		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	92.6	80	120			
Surr: BFB	18		20.00		91.0	80	120			

Sample ID 1411731-002BMS	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: MKTF-42	Batch ID: R22638		RunNo: 22638							
Prep Date:	Analysis Date: 11/19/2014		SeqNo: 668024		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	2.5	25.00	0	94.6	70.4	127			
Surr: BFB	920		1000		92.2	80	120			

Sample ID 1411731-002BMSD	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: MKTF-42	Batch ID: R22638		RunNo: 22638							
Prep Date:	Analysis Date: 11/19/2014		SeqNo: 668025		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	2.5	25.00	0	93.6	70.4	127	1.02	20	
Surr: BFB	930		1000		92.6	80	120	0	0	

Sample ID 5ML RB	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBW	Batch ID: R22716		RunNo: 22716							
Prep Date:	Analysis Date: 11/21/2014		SeqNo: 670112		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		92.8	80	120			

Sample ID 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSW	Batch ID: R22716		RunNo: 22716							
Prep Date:	Analysis Date: 11/21/2014		SeqNo: 670113		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSW	Batch ID:	R22716	RunNo:	22716					
Prep Date:		Analysis Date:	11/21/2014	SeqNo:	670113	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.6	80	120			
Surr: BFB	19		20.00		94.0	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup**Project:** Hydrocarbon Seep

Sample ID	5mL rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R22714			RunNo: 22714					
Prep Date:		Analysis Date: 11/21/2014			SeqNo: 669903	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	5mL rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R22714			RunNo: 22714					
Prep Date:		Analysis Date: 11/21/2014			SeqNo: 669903		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R22714			RunNo: 22714					
Prep Date:		Analysis Date: 11/21/2014			SeqNo: 669905		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	80	120			
Chlorobenzene	19	1.0	20.00	0	96.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	100ng lcs		SampType: LCS		TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW		Batch ID: R22714		RunNo: 22714					
Prep Date:			Analysis Date: 11/21/2014		SeqNo: 669905		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	92.4	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	86.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	mb-16481	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	16481	RunNo:	22682					
Prep Date:	11/19/2014	Analysis Date:	11/20/2014	SeqNo:	668827	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	ND	20								
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	10	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	mb-16481		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 16481		RunNo: 22682					
Prep Date:	11/19/2014		Analysis Date: 11/20/2014		SeqNo: 668827		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		72.8	17.6	104			
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		81.6	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		69.6	45.3	117			
Surr: 2-Fluorobiphenyl	74		100.0		74.0	43	113			
Surr: 4-Terphenyl-d14	99		100.0		99.0	47.6	122			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	lcs-16481		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 16481		RunNo: 22682					
Prep Date:	11/19/2014		Analysis Date: 11/20/2014		SeqNo: 668828		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	79.8	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	88.4	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113			
1,4-Dichlorobenzene	70	10	100.0	0	69.9	39.6	99.9			
2,4-Dinitrotoluene	70	10	100.0	0	70.1	40.8	113			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.0	51.2	111			
4-Nitrophenol	170	10	200.0	0	85.4	15.7	86.9			
Pentachlorophenol	120	20	200.0	0	60.0	21.6	104			
Phenol	160	10	200.0	0	80.1	28.6	71.7			S
Pyrene	76	10	100.0	0	75.8	54.2	128			
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	40.9	101			
Surr: 2-Fluorophenol	130		200.0		63.8	17.6	104			
Surr: Phenol-d5	130		200.0		66.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		82.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		66.8	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	43	113			
Surr: 4-Terphenyl-d14	81		100.0		81.0	47.6	122			

Sample ID	lcsd-16481		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 16481		RunNo: 22682					
Prep Date:	11/19/2014		Analysis Date: 11/20/2014		SeqNo: 668829		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	82.9	47.9	114	3.83	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122	7.36	25.9	
2-Chlorophenol	140	10	200.0	0	71.6	40.7	113	1.87	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	69.3	39.6	99.9	0.948	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.8	40.8	113	0.966	25.3	
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.0	51.2	111	2.61	23.6	
4-Nitrophenol	180	10	200.0	0	88.7	15.7	86.9	3.77	34.7	S
Pentachlorophenol	130	20	200.0	0	63.1	21.6	104	4.97	32.8	
Phenol	160	10	200.0	0	78.3	28.6	71.7	2.37	25.5	S
Pyrene	81	10	100.0	0	81.1	54.2	128	6.83	31.4	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.0	40.9	101	2.96	25.9	
Surr: 2-Fluorophenol	120		200.0		62.4	17.6	104	0	0	
Surr: Phenol-d5	130		200.0		64.7	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		85.0	16.3	122	0	0	
Surr: Nitrobenzene-d5	66		100.0		66.0	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	74		100.0		74.2	43	113	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411731

25-Nov-14

Client: Western Refining Southwest, Gallup**Project:** Hydrocarbon Seep

Sample ID	lcsd-16481		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 16481		RunNo: 22682					
Prep Date:	11/19/2014		Analysis Date: 11/20/2014		SeqNo: 668829		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	89		100.0		89.4	47.6	122	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1411731**

RcptNo: **1**

Received by/date:

[Signature] **11/18/14**

Logged By: **Ashley Gallegos**

11/18/2014 4:15:00 PM

[Signature]

Completed By: **Ashley Gallegos**

11/18/2014 5:10:29 PM

[Signature]

Reviewed By:

CS

11/19/14

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☒

No ☐

Not Present ☐

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Client

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?

Yes ☐

No ☐

NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record		Turn-Around Time:
Client: <u>WESTERN REFINING SW, INC.</u>		☒ Standard ☐ Rush
Mailing Address: <u>GALLUP REFINERY</u>		Project Name: <u>HYDROCARBON SEEP</u>
<u>92 GIANT CROSSING ROAD GALLUP</u>		Project #: <u>HYDROCARBON SEEP</u>
Phone #: <u>505.722.3833 NM 87301</u>		Project Manager: <u>CHERYL JOHNSON @ WNR.COM</u>
email or Fax#: <u>505.863.0930</u>		Sampler: <u>TRACY PAYNE</u>
QA/QC Package:		On Ice: ☒ Yes ☐ No
☐ Standard ☐ Level 4 (Full Validation)		Sample Temperature: <u>10</u>
Accreditation		
☐ NELAP ☐ Other _____		
☐ EDD (Type) _____		

☒ Standard ☐ Rush

Project Name:

Name: HYDROCARBON
SEEP

Project #:

HYDROCARBON
SEEP

Project Manager:

L. JOHNSON

CHERYL.
JOHNSON@
WNR.COM

Sampler:

TRAY PAYNE

On Ice

☒ Yes

IN

Sample Temperature



HEALING

151172

Black	White	Black
White	Black	White
Black	White	Black

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Date: 1.18.14	Time: 1220	Relinquished by: 
------------------	---------------	---

Received by: [Signature] Date 11-18-14 Time 2:00

Remarks:

Date:	Time:	Relinquished by:
1/18/14	16:50	[Signature]

Received by: [Signature] Date: 11/18/14 Time: 1615

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

December 04, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Hydrocarbon Seep

OrderNo.: 1411984

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 11/22/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-44

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 8:30:00 AM

Lab ID: 1411984-001

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: JME
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 3:55:34 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 3:55:34 PM	16539
Surr: DNOP	110	59-141		%REC	1	11/25/2014 3:55:34 PM	16539
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 3:25:31 PM	R22836
Surr: BFB	89.8	80-120		%REC	1	11/26/2014 3:25:31 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-44

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 8:30:00 AM

Lab ID: 1411984-001

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3,3'-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-44

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 8:30:00 AM

Lab ID: 1411984-001

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Surr: 2-Fluorophenol	75.3	17.6-104		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: Phenol-d5	64.5	17.7-89.9		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 2,4,6-Tribromophenol	91.5	16.3-122		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: Nitrobenzene-d5	84.9	45.3-117		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 2-Fluorobiphenyl	95.8	43-113		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 4-Terphenyl-d14	94.3	47.6-122		%REC	1	12/2/2014 4:38:40 PM	16584
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Toluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Ethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Naphthalene	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1-Methylnaphthalene	ND	8.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Methylnaphthalene	ND	8.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Acetone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromodichloromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromoform	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromomethane	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Butanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Carbon disulfide	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Carbon Tetrachloride	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloroethane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloroform	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloromethane	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Chlorotoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Chlorotoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
cis-1,2-DCE	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dibromochloromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dibromomethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-44

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 8:30:00 AM

Lab ID: 1411984-001

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,3-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,4-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dichlorodifluoromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloroethene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichloropropane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,3-Dichloropropane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2,2-Dichloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Hexachlorobutadiene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Hexanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Isopropylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Isopropyltoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Methyl-2-pentanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Methylene Chloride	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
n-Butylbenzene	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
n-Propylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
sec-Butylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Styrene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
tert-Butylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
trans-1,2-DCE	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,1-Trichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,2-Trichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Trichloroethene (TCE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Trichlorofluoromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,3-Trichloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Vinyl chloride	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Xylenes, Total	ND	3.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Surr: 1,2-Dichloroethane-d4	86.5	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: 4-Bromofluorobenzene	91.3	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: Dibromofluoromethane	95.8	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: Toluene-d8	89.7	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 9:30:00 AM

Lab ID: 1411984-002

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: JME
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 4:25:45 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 4:25:45 PM	16539
Surr: DNOP	110	59-141		%REC	1	11/25/2014 4:25:45 PM	16539
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 3:52:49 PM	R22836
Surr: BFB	96.7	80-120		%REC	1	11/26/2014 3:52:49 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 5 of 35
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 9:30:00 AM

Lab ID: 1411984-002

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3,3'-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 9:30:00 AM

Lab ID: 1411984-002

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Surr: 2-Fluorophenol	75.4	17.6-104		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: Phenol-d5	65.5	17.7-89.9		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 2,4,6-Tribromophenol	79.3	16.3-122		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: Nitrobenzene-d5	86.2	45.3-117		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 2-Fluorobiphenyl	90.6	43-113		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 4-Terphenyl-d14	97.1	47.6-122		%REC	1	12/2/2014 5:06:02 PM	16584
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Naphthalene	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-40

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 9:30:00 AM

Lab ID: 1411984-002

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 4:23:31 PM	R22805
Surr: 1,2-Dichloroethane-d4	87.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: 4-Bromofluorobenzene	88.4	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: Dibromofluoromethane	99.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: Toluene-d8	91.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 8 of 35
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-38

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 10:40:00 AM

Lab ID: 1411984-003

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: JME
Diesel Range Organics (DRO)	3.8	1.0		mg/L	1	11/25/2014 4:56:24 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 4:56:24 PM	16539
Surr: DNOP	109	59-141		%REC	1	11/25/2014 4:56:24 PM	16539
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	0.12	0.050		mg/L	1	11/26/2014 4:20:16 PM	R22836
Surr: BFB	91.1	80-120		%REC	1	11/26/2014 4:20:16 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-38

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 10:40:00 AM

Lab ID: 1411984-003

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3,3'-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-38

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 10:40:00 AM

Lab ID: 1411984-003

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Surr: 2-Fluorophenol	79.5	17.6-104		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: Phenol-d5	63.8	17.7-89.9		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 2,4,6-Tribromophenol	95.2	16.3-122		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: Nitrobenzene-d5	83.4	45.3-117		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 2-Fluorobiphenyl	89.8	43-113		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 4-Terphenyl-d14	98.4	47.6-122		%REC	1	12/2/2014 5:33:35 PM	16584
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	2.8	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Ethylbenzene	2.9	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Methyl tert-butyl ether (MTBE)	7.4	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,4-Trimethylbenzene	4.6	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,3,5-Trimethylbenzene	1.5	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Naphthalene	5.5	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1-Methylnaphthalene	8.8	4.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Methylnaphthalene	9.8	4.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-38

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 10:40:00 AM

Lab ID: 1411984-003

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Isopropyltoluene	1.4	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Trichloroethene (TCE)	1.1	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Xylenes, Total	3.1	1.5		µg/L	1	11/25/2014 4:51:02 PM	R22805
Surr: 1,2-Dichloroethane-d4	78.5	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: 4-Bromofluorobenzene	87.7	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: Dibromofluoromethane	89.5	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: Toluene-d8	91.0	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 11:55:00 AM

Lab ID: 1411984-004

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: JME
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 5:26:53 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 5:26:53 PM	16539
Surr: DNOP	103	59-141		%REC	1	11/25/2014 5:26:53 PM	16539
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	8.7	0.50		mg/L	10	11/26/2014 5:14:34 PM	R22836
Surr: BFB	131	80-120	S	%REC	10	11/26/2014 5:14:34 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 11:55:00 AM

Lab ID: 1411984-004

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3,3'-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1-Methylnaphthalene	50	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Methylnaphthalene	56	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Naphthalene	270	20		µg/L	2	12/3/2014 9:31:07 AM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 11:55:00 AM

Lab ID: 1411984-004

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES				Analyst: JDC			
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Surr: 2-Fluorophenol	86.3	17.6-104		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: Phenol-d5	59.5	17.7-89.9		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 2,4,6-Tribromophenol	102	16.3-122		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: Nitrobenzene-d5	86.4	45.3-117		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 2-Fluorobiphenyl	98.0	43-113		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 4-Terphenyl-d14	108	47.6-122		%REC	1	12/2/2014 6:01:08 PM	16584
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
Benzene	140	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Toluene	200	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Ethylbenzene	9.3	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Methyl tert-butyl ether (MTBE)	27	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,4-Trimethylbenzene	510	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,3,5-Trimethylbenzene	140	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,2-Dichloroethane (EDC)	17	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dibromoethane (EDB)	1.5	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Naphthalene	350	40		µg/L	20	11/26/2014 11:21:16 AM	R22841
1-Methylnaphthalene	47	4.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Methylnaphthalene	84	4.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-37

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 11:55:00 AM

Lab ID: 1411984-004

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloroethane	34	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloroethene	210	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Isopropylbenzene	78	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Isopropyltoluene	4.8	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
n-Butylbenzene	26	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
n-Propylbenzene	82	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
sec-Butylbenzene	11	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,2-Trichloroethane	1.7	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Trichloroethene (TCE)	300	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Xylenes, Total	1300	30		µg/L	20	11/26/2014 11:21:16 AM	R22841
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: 4-Bromofluorobenzene	92.2	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: Dibromofluoromethane	83.3	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: Toluene-d8	90.9	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 12:40:00 PM

Lab ID: 1411984-005

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: JME
Diesel Range Organics (DRO)	3.3	1.0		mg/L	1	11/25/2014 5:57:22 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 5:57:22 PM	16539
Surr: DNOP	104	59-141		%REC	1	11/25/2014 5:57:22 PM	16539
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1.6	0.25		mg/L	5	11/26/2014 6:36:38 PM	R22836
Surr: BFB	91.3	80-120		%REC	5	11/26/2014 6:36:38 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 12:40:00 PM

Lab ID: 1411984-005

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3,3'-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1-Methylnaphthalene	34	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Methylnaphthalene	45	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Naphthalene	36	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 12:40:00 PM

Lab ID: 1411984-005

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Surr: 2-Fluorophenol	72.7	17.6-104		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: Phenol-d5	59.1	17.7-89.9		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 2,4,6-Tribromophenol	96.2	16.3-122		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: Nitrobenzene-d5	83.0	45.3-117		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 2-Fluorobiphenyl	99.1	43-113		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 4-Terphenyl-d14	100	47.6-122		%REC	1	12/2/2014 6:28:36 PM	16584
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	39	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Ethylbenzene	52	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Methyl tert-butyl ether (MTBE)	66	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,4-Trimethylbenzene	120	10		µg/L	10	11/26/2014 11:48:52 AM	R22841
1,3,5-Trimethylbenzene	50	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Naphthalene	40	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1-Methylnaphthalene	38	4.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Methylnaphthalene	59	4.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-35

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 12:40:00 PM

Lab ID: 1411984-005

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Isopropylbenzene	5.1	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
n-Butylbenzene	6.1	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
n-Propylbenzene	28	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
sec-Butylbenzene	2.7	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Xylenes, Total	73	1.5		µg/L	1	11/25/2014 6:13:36 PM	R22805
Surr: 1,2-Dichloroethane-d4	77.7	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: 4-Bromofluorobenzene	84.2	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: Dibromofluoromethane	86.9	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: Toluene-d8	88.8	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-36

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 1:30:00 PM

Lab ID: 1411984-006

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: JME
Diesel Range Organics (DRO)	6.8	1.0		mg/L	1	11/25/2014 6:27:26 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 6:27:26 PM	16539
Surr: DNOP	92.2	59-141		%REC	1	11/25/2014 6:27:26 PM	16539
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	25	5.0		mg/L	100	11/26/2014 7:03:58 PM	R22836
Surr: BFB	91.6	80-120		%REC	100	11/26/2014 7:03:58 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-36

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 1:30:00 PM

Lab ID: 1411984-006

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3,3'-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1-Methylnaphthalene	160	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Methylnaphthalene	230	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Naphthalene	280	20		µg/L	2	12/3/2014 9:58:32 AM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Phenol	15	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-36

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 1:30:00 PM

Lab ID: 1411984-006

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Surr: 2-Fluorophenol	52.4	17.6-104		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: Phenol-d5	50.2	17.7-89.9		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 2,4,6-Tribromophenol	73.8	16.3-122		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: Nitrobenzene-d5	64.7	45.3-117		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 2-Fluorobiphenyl	68.9	43-113		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 4-Terphenyl-d14	75.2	47.6-122		%REC	1	12/2/2014 6:56:01 PM	16584
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	8400	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
Toluene	32	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Ethylbenzene	1500	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
Methyl tert-butyl ether (MTBE)	7200	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
1,2,4-Trimethylbenzene	270	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,3,5-Trimethylbenzene	62	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Naphthalene	590	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
1-Methylnaphthalene	340	40		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Methylnaphthalene	530	40		µg/L	10	11/25/2014 7:08:09 PM	R22805
Acetone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromodichloromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromoform	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromomethane	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Butanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Carbon disulfide	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Carbon Tetrachloride	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloroethane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloroform	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloromethane	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Chlorotoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Chlorotoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
cis-1,2-DCE	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dibromochloromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dibromomethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MKTF-36

Project: Hydrocarbon Seep

Collection Date: 11/21/2014 1:30:00 PM

Lab ID: 1411984-006

Matrix: AQUEOUS

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: DJF			
1,3-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,4-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dichlorodifluoromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloroethene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichloropropane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,3-Dichloropropane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
2,2-Dichloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Hexachlorobutadiene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Hexanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Isopropylbenzene	41	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Isopropyltoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Methyl-2-pentanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Methylene Chloride	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
n-Butylbenzene	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
n-Propylbenzene	99	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
sec-Butylbenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Styrene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
tert-Butylbenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
trans-1,2-DCE	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,1-Trichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,2-Trichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Trichloroethene (TCE)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Trichlorofluoromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,3-Trichloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Vinyl chloride	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Xylenes, Total	560	15		µg/L	10	11/25/2014 7:08:09 PM	R22805
Surr: 1,2-Dichloroethane-d4	84.3	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: 4-Bromofluorobenzene	87.9	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: Dibromofluoromethane	93.1	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: Toluene-d8	89.0	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: Hydrocarbon Seep

Collection Date:

Lab ID: 1411984-007

Matrix: TRIP BLANK

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 7:31:15 PM	R22836
Surr: BFB	89.8	80-120		%REC	1	11/26/2014 7:31:15 PM	R22836
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Naphthalene	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1411984

Date Reported: 12/4/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: Hydrocarbon Seep

Collection Date:

Lab ID: 1411984-007

Matrix: TRIP BLANK

Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 7:35:39 PM	R22805
Surr: 1,2-Dichloroethane-d4	82.3	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: 4-Bromofluorobenzene	85.7	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: Dibromofluoromethane	95.6	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: Toluene-d8	92.6	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	MB-16539	SampType: MBLK			TestCode: EPA Method 8015D: Diesel Range					
Client ID:	PBW	Batch ID: 16539			RunNo: 22772					
Prep Date:	11/24/2014	Analysis Date: 11/25/2014			SeqNo: 672635		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	59	141			

Sample ID	LCS-16539		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	LCSW		Batch ID: 16539		RunNo: 22764					
Prep Date:	11/24/2014		Analysis Date: 11/25/2014		SeqNo: 672636		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.9	1.0	5.000	0	117	69.7	142			
Surr: DNOP	0.62		0.5000		123	59	141			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	5ML RB		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBW		Batch ID: R22836		RunNo: 22836					
Prep Date:			Analysis Date: 11/26/2014		SeqNo: 673913		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	17		20.00		86.5	80	120			

Sample ID	2.5UG GRO LCS		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSW		Batch ID: R22836		RunNo: 22836					
Prep Date:			Analysis Date: 11/26/2014		SeqNo: 673914		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.8	80	120			
Surr: BFB	18		20.00		92.4	80	120			

Sample ID	1411984-004BMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	MKTF-37		Batch ID: R22836		RunNo: 22836					
Prep Date:			Analysis Date: 11/26/2014		SeqNo: 673928		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	0.50	5.000	8.746	103	70.4	127			
Surr: BFB	280		200.0		141	80	120			S

Sample ID	1411984-004BMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	MKTF-37		Batch ID: R22836		RunNo: 22836					
Prep Date:			Analysis Date: 11/26/2014		SeqNo: 673929		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	0.50	5.000	8.746	98.4	70.4	127	1.71	20	
Surr: BFB	280		200.0		140	80	120	0	0	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup**Project:** Hydrocarbon Seep

Sample ID	5ml rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R22805			RunNo: 22805					
Prep Date:		Analysis Date: 11/25/2014			SeqNo: 672998	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	5ml rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R22805			RunNo: 22805					
Prep Date:		Analysis Date: 11/25/2014			SeqNo: 672998		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.3	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		87.9	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	9.0		10.00		89.7	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R22805			RunNo: 22805					
Prep Date:		Analysis Date: 11/25/2014			SeqNo: 673000		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
Chlorobenzene	22	1.0	20.00	0	109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	100ng lcs		SampType: LCS			TestCode: EPA Method 8260B: VOLATILES				
Client ID:	LCSW		Batch ID: R22805			RunNo: 22805				
Prep Date:	Analysis Date: 11/25/2014			SeqNo: 673000		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.8	70	130			
Surr: Dibromofluoromethane	8.1		10.00		80.6	70	130			
Surr: Toluene-d8	8.8		10.00		88.5	70	130			

Sample ID	5ml rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R22841			RunNo: 22841					
Prep Date:		Analysis Date: 11/26/2014			SeqNo: 674028		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								
Naphthalene	ND	2.0								
1,1-Dichloroethene	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.7	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID	100ng lcs		SampType: LCS			TestCode: EPA Method 8260B: VOLATILES				
Client ID:	LCSW		Batch ID: R22841			RunNo: 22841				
Prep Date:	Analysis Date: 11/26/2014			SeqNo: 674030		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.3	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.5	70	130			
Surr: Toluene-d8	9.2		10.00		91.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	mb-16584		SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW		Batch ID: 16584		RunNo: 22880					
Prep Date:	11/26/2014		Analysis Date: 12/2/2014		SeqNo: 675850		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	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	mb-16584		SampType: MBLK			TestCode: EPA Method 8270C: Semivolatiles				
Client ID:	PBW		Batch ID: 16584			RunNo: 22880				
Prep Date:	11/26/2014		Analysis Date: 12/2/2014			SeqNo: 675850		Units: µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		80.0	17.6	104			
Surr: Phenol-d5	160		200.0		81.3	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.0	16.3	122			
Surr: Nitrobenzene-d5	77		100.0		76.6	45.3	117			
Surr: 2-Fluorobiphenyl	80		100.0		80.2	43	113			
Surr: 4-Terphenyl-d14	89		100.0		89.1	47.6	122			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	lcs-16584		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 16584		RunNo: 22880					
Prep Date:	11/26/2014		Analysis Date: 12/2/2014		SeqNo: 675851		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.5	47.9	114			
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.6	40.7	113			
1,4-Dichlorobenzene	72	10	100.0	0	72.5	39.6	99.9			
2,4-Dinitrotoluene	60	10	100.0	0	60.0	40.8	113			
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.2	51.2	111			
4-Nitrophenol	150	10	200.0	0	73.4	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	65.7	21.6	104			
Phenol	170	10	200.0	0	83.2	28.6	71.7			S
Pyrene	74	10	100.0	0	73.7	54.2	128			
1,2,4-Trichlorobenzene	68	10	100.0	0	67.6	40.9	101			
Surr: 2-Fluorophenol	150		200.0		75.4	17.6	104			
Surr: Phenol-d5	160		200.0		78.8	17.7	89.9			
Surr: 2,4,6-Tribromophenol	150		200.0		75.4	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		70.3	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		71.9	43	113			
Surr: 4-Terphenyl-d14	86		100.0		85.6	47.6	122			

Sample ID	lcsd-16584		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 16584		RunNo: 22880					
Prep Date:	11/26/2014		Analysis Date: 12/2/2014		SeqNo: 675852		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.7	47.9	114	0.163	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	80.6	51.7	122	1.93	25.9	
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113	0.819	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	68.7	39.6	99.9	5.30	24.6	
2,4-Dinitrotoluene	72	10	100.0	0	71.9	40.8	113	18.0	25.3	
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.7	51.2	111	6.74	23.6	
4-Nitrophenol	170	10	200.0	0	85.8	15.7	86.9	15.7	34.7	
Pentachlorophenol	160	20	200.0	0	78.8	21.6	104	18.1	32.8	
Phenol	160	10	200.0	0	80.6	28.6	71.7	3.21	25.5	S
Pyrene	73	10	100.0	0	73.5	54.2	128	0.326	31.4	
1,2,4-Trichlorobenzene	62	10	100.0	0	61.6	40.9	101	9.35	25.9	
Surr: 2-Fluorophenol	130		200.0		67.0	17.6	104	0	0	
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		79.8	16.3	122	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.2	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	67		100.0		67.1	43	113	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1411984

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Hydrocarbon Seep

Sample ID	lcsd-16584		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 16584		RunNo: 22880					
Prep Date:	11/26/2014		Analysis Date: 12/2/2014		SeqNo: 675852		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		85.5	47.6	122	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1411984**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

11/22/2014 8:37:00 AM

Completed By: **Lindsay Mangin**

11/22/2014 10:09:42 AM

Reviewed By:

AT 11/24/14

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
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:

(<2 or >12 unless noted)

Adjusted?

Checked by:

Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

Client: WNR - GALLUP REFINERY

Mailing Address: ROUTE 3 BOX 7

GALLUP NM 87301

Phone #: 505-722-0231

email or Fax#: CHERYL.JOHNSON@WNR.COM

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

HYDROCARBON SEEP

Project #:

Project Manager:

CHERYL JOHNSON

Sampler:

TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature:

1.8

Container Type and #

Preservative Type

HEAL No.

1411984

12/14 0830 GW MKTF-44

7

HCL/NEAT

-001

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, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

1 0930 GW MKTF-40

7

HCL/NEAT

-002

1040 GW MKTF-38

7

HCL/NEAT

-003

1155 GW MKTF-37

7

HCL/NEAT

-004

1240 GW MKTF-35

7

HCL/NEAT

-005

1330 GW MKTF-36

7

HCL/NEAT

-006

W TRIP BLANK

3

HCL

-007

Date: 12/14 Time: 0837 Relinquished by: [Signature]

Date: 12/14 Time: 0837 Relinquished by: [Signature]

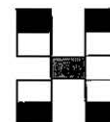
Received by: [Signature]

Received by: [Signature]

Date: 11/22/14 Time: 0837

Date: 11/22/14 Time: 0837

Remarks:



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request



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

October 07, 2014

Cheryl Johnson

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW

OrderNo.: 1409A34

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 9/19/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A34**

Date Reported: **10/7/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-6

Project: 2014 Annual GW

Collection Date: 9/18/2014 10:50:00 AM

Lab ID: 1409A34-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	10	1.0		mg/L	1	9/23/2014 8:18:40 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 8:18:40 AM	15424
Surr: DNOP	121	59-141		%REC	1	9/23/2014 8:18:40 AM	15424
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	13	2.5		mg/L	50	9/25/2014 1:31:27 AM	R21431
Surr: BFB	95.0	70.9-130		%REC	50	9/25/2014 1:31:27 AM	R21431
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	3.2	0.020	*	mg/L	10	9/25/2014 5:17:13 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:31:41 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:31:41 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:31:41 PM	R21450
Iron	6.5	0.20	*	mg/L	10	9/25/2014 5:17:13 PM	R21450
Manganese	0.75	0.0020	*	mg/L	1	9/25/2014 3:31:41 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:31:41 PM	R21450
Zinc	0.024	0.010		mg/L	1	9/25/2014 3:31:41 PM	R21450
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	3.3	0.010	*	mg/L	5	9/25/2014 6:09:04 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:04:15 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:04:15 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:04:15 PM	15445
Iron	6.8	0.20	*	mg/L	10	9/25/2014 6:22:36 PM	15445
Manganese	0.79	0.010	*	mg/L	5	9/25/2014 6:09:04 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:04:15 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:04:15 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.014	0.0050	*	mg/L	5	10/2/2014 4:58:06 PM	R21629
Lead	0.0049	0.0010		mg/L	1	9/30/2014 2:04:42 PM	R21559
Selenium	ND	0.0050		mg/L	5	10/2/2014 4:58:06 PM	R21629
Uranium	ND	0.0010		mg/L	1	9/30/2014 2:04:42 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.014	0.0010	*	mg/L	1	10/2/2014 2:02:02 PM	15445
Lead	0.0067	0.0010		mg/L	1	10/2/2014 2:02:02 PM	15445
Selenium	0.0015	0.0010		mg/L	1	10/2/2014 2:02:02 PM	15445
Uranium	ND	0.0010		mg/L	1	10/2/2014 2:02:02 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:15:30 PM	15531

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-6

Project: 2014 Annual GW

Collection Date: 9/18/2014 10:50:00 AM

Lab ID: 1409A34-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 53
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-6

Project: 2014 Annual GW

Collection Date: 9/18/2014 10:50:00 AM

Lab ID: 1409A34-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1-Methylnaphthalene	170	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Methylnaphthalene	190	50		µg/L	5	9/25/2014 2:30:16 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Naphthalene	350	50		µg/L	5	9/25/2014 2:30:16 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Surr: 2-Fluorophenol	83.3	12.1-85.8		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: Phenol-d5	58.1	17.7-65.8		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: 2,4,6-Tribromophenol	90.4	26-138		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: Nitrobenzene-d5	88.1	47.5-119		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: 2-Fluorobiphenyl	95.9	48.1-106		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: 4-Terphenyl-d14	104	44-113		%REC	1	9/24/2014 6:28:56 PM	15440

EPA METHOD 8260B: VOLATILES

Analyst: KJH

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-6

Project: 2014 Annual GW

Collection Date: 9/18/2014 10:50:00 AM

Lab ID: 1409A34-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Benzene	470	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Toluene	230	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Ethylbenzene	450	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Methyl tert-butyl ether (MTBE)	46	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,4-Trimethylbenzene	170	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,3,5-Trimethylbenzene	170	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Naphthalene	570	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
1-Methylnaphthalene	190	40		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Methylnaphthalene	280	40		µg/L	10	9/29/2014 3:10:55 PM	R21507
Acetone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromodichloromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromoform	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromomethane	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Butanone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Carbon disulfide	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Carbon Tetrachloride	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chloroethane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chloroform	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chloromethane	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Chlorotoluene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
4-Chlorotoluene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
cis-1,2-DCE	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
cis-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Dibromochloromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Dibromomethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,3-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,4-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Dichlorodifluoromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1-Dichloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1-Dichloroethene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dichloropropane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,3-Dichloropropane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
2,2-Dichloropropane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 53
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-6

Project: 2014 Annual GW

Collection Date: 9/18/2014 10:50:00 AM

Lab ID: 1409A34-001

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
1,1-Dichloropropene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Hexachlorobutadiene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Hexanone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Isopropylbenzene	45	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
4-Isopropyltoluene	11	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
4-Methyl-2-pentanone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Methylene Chloride	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
n-Butylbenzene	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
n-Propylbenzene	110	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
sec-Butylbenzene	11	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Styrene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
tert-Butylbenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Tetrachloroethene (PCE)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
trans-1,2-DCE	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
trans-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,3-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,4-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,1-Trichloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,2-Trichloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Trichloroethene (TCE)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Trichlorofluoromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,3-Trichloropropane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Vinyl chloride	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Xylenes, Total	1300	15		µg/L	10	9/29/2014 3:10:55 PM	R21507
Surr: 1,2-Dichloroethane-d4	90.8	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507
Surr: 4-Bromofluorobenzene	96.6	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507
Surr: Dibromofluoromethane	90.2	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507
Surr: Toluene-d8	92.1	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-5

Project: 2014 Annual GW

Collection Date: 9/18/2014 11:40:00 AM

Lab ID: 1409A34-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	2.2	1.0		mg/L	1	9/23/2014 8:48:40 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 8:48:40 AM	15424
Surr: DNOP	115	59-141		%REC	1	9/23/2014 8:48:40 AM	15424
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	3.5	0.50		mg/L	10	9/25/2014 1:59:53 AM	R21431
Surr: BFB	95.7	70.9-130		%REC	10	9/25/2014 1:59:53 AM	R21431
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	1.9	0.010		mg/L	5	9/25/2014 5:19:02 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:33:22 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:33:22 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:33:22 PM	R21450
Iron	2.6	0.10	*	mg/L	5	9/25/2014 5:19:02 PM	R21450
Manganese	0.50	0.0020	*	mg/L	1	9/25/2014 3:33:22 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:33:22 PM	R21450
Zinc	0.049	0.010		mg/L	1	9/25/2014 3:33:22 PM	R21450
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	2.0	0.010		mg/L	5	9/25/2014 6:24:26 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:09:35 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:09:35 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:09:35 PM	15445
Iron	2.8	0.10	*	mg/L	5	9/25/2014 6:24:26 PM	15445
Manganese	0.50	0.0020	*	mg/L	1	9/25/2014 3:09:35 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:09:35 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:09:35 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	0.0020	0.0010		mg/L	1	10/2/2014 5:07:24 PM	R21629
Lead	ND	0.0010		mg/L	1	9/30/2014 2:14:01 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 5:07:24 PM	R21629
Uranium	ND	0.0010		mg/L	1	9/30/2014 2:14:01 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.0019	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
Uranium	ND	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:17:20 PM	15531

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-5

Project: 2014 Annual GW

Collection Date: 9/18/2014 11:40:00 AM

Lab ID: 1409A34-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 7 of 53
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-5

Project: 2014 Annual GW

Collection Date: 9/18/2014 11:40:00 AM

Lab ID: 1409A34-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES				Analyst: JDC			
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1-Methylnaphthalene	39	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Methylnaphthalene	44	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Naphthalene	39	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Surr: 2-Fluorophenol	48.9	12.1-85.8		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: Phenol-d5	40.2	17.7-65.8		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: 2,4,6-Tribromophenol	52.2	26-138		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: Nitrobenzene-d5	61.5	47.5-119		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: 2-Fluorobiphenyl	64.2	48.1-106		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: 4-Terphenyl-d14	69.6	44-113		%REC	1	9/24/2014 6:57:53 PM	15440

EPA METHOD 8260B: VOLATILES

Analyst: KJH

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-5

Project: 2014 Annual GW

Collection Date: 9/18/2014 11:40:00 AM

Lab ID: 1409A34-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	350	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Toluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Ethylbenzene	110	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,4-Trimethylbenzene	45	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,3,5-Trimethylbenzene	11	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Naphthalene	100	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
1-Methylnaphthalene	84	40		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Methylnaphthalene	110	40		µg/L	10	9/29/2014 4:39:43 PM	R21507
Acetone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromodichloromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromoform	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromomethane	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Butanone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Carbon disulfide	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Carbon Tetrachloride	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chloroethane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chloroform	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chloromethane	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Chlorotoluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
4-Chlorotoluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
cis-1,2-DCE	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
cis-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Dibromochloromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Dibromomethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,3-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,4-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Dichlorodifluoromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1-Dichloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1-Dichloroethene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dichloropropane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,3-Dichloropropane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
2,2-Dichloropropane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 9 of 53
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-5

Project: 2014 Annual GW

Collection Date: 9/18/2014 11:40:00 AM

Lab ID: 1409A34-002

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,1-Dichloropropene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Hexachlorobutadiene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Hexanone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Isopropylbenzene	12	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
4-Isopropyltoluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
4-Methyl-2-pentanone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Methylene Chloride	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
n-Butylbenzene	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
n-Propylbenzene	39	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
sec-Butylbenzene	10	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Styrene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
tert-Butylbenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Tetrachloroethene (PCE)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
trans-1,2-DCE	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
trans-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,3-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,4-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,1-Trichloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,2-Trichloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Trichloroethene (TCE)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Trichlorofluoromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,3-Trichloropropane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Vinyl chloride	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Xylenes, Total	56	15		µg/L	10	9/29/2014 4:39:43 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507
Surr: 4-Bromofluorobenzene	96.1	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507
Surr: Dibromofluoromethane	90.1	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507
Surr: Toluene-d8	96.0	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A34**

Date Reported: **10/7/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-2

Project: 2014 Annual GW

Collection Date: 9/18/2014 12:15:00 PM

Lab ID: 1409A34-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	7.8	1.0		mg/L	1	9/23/2014 9:18:39 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 9:18:39 AM	15424
Surr: DNOP	101	59-141		%REC	1	9/23/2014 9:18:39 AM	15424
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	120	10		mg/L	200	9/25/2014 2:28:34 AM	R21431
Surr: BFB	88.3	70.9-130		%REC	200	9/25/2014 2:28:34 AM	R21431
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	3.8	0.020	*	mg/L	10	9/25/2014 5:28:09 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:35:03 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:35:03 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:35:03 PM	R21450
Iron	13	1.0	*	mg/L	50	9/25/2014 5:29:47 PM	R21450
Manganese	2.4	0.020	*	mg/L	10	9/25/2014 5:28:09 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:35:03 PM	R21450
Zinc	0.023	0.010		mg/L	1	9/25/2014 3:35:03 PM	R21450
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	4.1	0.020	*	mg/L	10	9/25/2014 6:26:18 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:18:46 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:18:46 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:18:46 PM	15445
Iron	15	1.0	*	mg/L	50	9/25/2014 6:27:57 PM	15445
Manganese	2.6	0.020	*	mg/L	10	9/25/2014 6:26:18 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:18:46 PM	15445
Zinc	0.016	0.010		mg/L	1	9/25/2014 3:18:46 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	ND	0.010		mg/L	10	10/2/2014 5:10:30 PM	R21629
Lead	ND	0.0010		mg/L	1	9/30/2014 2:17:07 PM	R21559
Selenium	ND	0.010		mg/L	10	10/2/2014 5:10:30 PM	R21629
Uranium	ND	0.0010		mg/L	1	9/30/2014 2:17:07 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.0086	0.0050		mg/L	5	10/2/2014 3:08:52 PM	15445
Lead	0.0043	0.0010		mg/L	1	10/2/2014 2:14:26 PM	15445
Selenium	0.0057	0.0050		mg/L	5	10/2/2014 3:08:52 PM	15445
Uranium	ND	0.0010		mg/L	1	10/2/2014 2:14:26 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:22:54 PM	15531

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-2

Project: 2014 Annual GW

Collection Date: 9/18/2014 12:15:00 PM

Lab ID: 1409A34-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Aniline	140	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4-Dimethylphenol	84	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-2

Project: 2014 Annual GW

Collection Date: 9/18/2014 12:15:00 PM

Lab ID: 1409A34-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1-Methylnaphthalene	68	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Methylphenol	32	20		µg/L	1	9/24/2014 7:26:45 PM	15440
3+4-Methylphenol	22	10		µg/L	1	9/24/2014 7:26:45 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Naphthalene	65	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Phenol	61	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Surr: 2-Fluorophenol	80.3	12.1-85.8		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: Phenol-d5	75.8	17.7-65.8	S	%REC	1	9/24/2014 7:26:45 PM	15440
Surr: 2,4,6-Tribromophenol	96.0	26-138		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: Nitrobenzene-d5	102	47.5-119		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: 2-Fluorobiphenyl	94.6	48.1-106		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: 4-Terphenyl-d14	107	44-113		%REC	1	9/24/2014 7:26:45 PM	15440

EPA METHOD 8260B: VOLATILES

Analyst: KJH

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-2

Project: 2014 Annual GW

Collection Date: 9/18/2014 12:15:00 PM

Lab ID: 1409A34-003

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst: KJH		
Benzene	40000	1000		µg/L	1E	9/29/2014 5:09:16 PM	R21507
Toluene	4500	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Ethylbenzene	860	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Methyl tert-butyl ether (MTBE)	1900	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,4-Trimethylbenzene	150	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,3,5-Trimethylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dichloroethane (EDC)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dibromoethane (EDB)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Naphthalene	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
1-Methylnaphthalene	ND	400		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Methylnaphthalene	ND	400		µg/L	100	9/29/2014 5:38:48 PM	R21507
Acetone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromodichloromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromoform	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromomethane	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Butanone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Carbon disulfide	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Carbon Tetrachloride	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chloroethane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chloroform	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chloromethane	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Chlorotoluene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
4-Chlorotoluene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
cis-1,2-DCE	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
cis-1,3-Dichloropropene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Dibromochloromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Dibromomethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,3-Dichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,4-Dichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Dichlorodifluoromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1-Dichloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1-Dichloroethene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dichloropropane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,3-Dichloropropane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
2,2-Dichloropropane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A34**Date Reported: **10/7/2014****CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** RW-2**Project:** 2014 Annual GW**Collection Date:** 9/18/2014 12:15:00 PM**Lab ID:** 1409A34-003**Matrix:** AQUEOUS**Received Date:** 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,1-Dichloropropene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Hexachlorobutadiene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Hexanone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Isopropylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
4-Isopropyltoluene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
4-Methyl-2-pentanone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Methylene Chloride	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
n-Butylbenzene	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
n-Propylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
sec-Butylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Styrene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
tert-Butylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,2,2-Tetrachloroethane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Tetrachloroethene (PCE)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
trans-1,2-DCE	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
trans-1,3-Dichloropropene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,3-Trichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,4-Trichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,1-Trichloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,2-Trichloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Trichloroethene (TCE)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Trichlorofluoromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,3-Trichloropropane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Vinyl chloride	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Xylenes, Total	2500	150		µg/L	100	9/29/2014 5:38:48 PM	R21507
Surr: 1,2-Dichloroethane-d4	90.4	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507
Surr: 4-Bromofluorobenzene	96.4	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507
Surr: Dibromofluoromethane	88.6	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507
Surr: Toluene-d8	91.6	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-1

Project: 2014 Annual GW

Collection Date: 9/18/2014 3:00:00 PM

Lab ID: 1409A34-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	18	1.0		mg/L	1	9/23/2014 9:48:27 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 9:48:27 AM	15424
Surr: DNOP	112	59-141		%REC	1	9/23/2014 9:48:27 AM	15424
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	150	25		mg/L	500	9/25/2014 5:01:55 PM	R21468
Surr: BFB	94.1	70.9-130		%REC	500	9/25/2014 5:01:55 PM	R21468
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	3.6	0.020	*	mg/L	10	9/25/2014 5:31:42 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:43:55 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:43:55 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:43:55 PM	R21450
Iron	9.6	0.20	*	mg/L	10	9/25/2014 5:31:42 PM	R21450
Manganese	3.3	0.020	*	mg/L	10	9/25/2014 5:31:42 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:43:55 PM	R21450
Zinc	0.067	0.010		mg/L	1	9/25/2014 3:43:55 PM	R21450
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	3.5	0.020	*	mg/L	10	9/25/2014 6:29:53 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:20:32 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:20:32 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:20:32 PM	15445
Iron	9.6	0.20	*	mg/L	10	9/25/2014 6:29:53 PM	15445
Manganese	3.2	0.020	*	mg/L	10	9/25/2014 6:29:53 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:20:32 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:20:32 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	ND	0.010		mg/L	10	10/2/2014 5:19:49 PM	R21629
Lead	ND	0.0010		mg/L	1	9/30/2014 2:20:13 PM	R21559
Selenium	ND	0.010		mg/L	10	10/2/2014 5:19:49 PM	R21629
Uranium	0.0014	0.0010		mg/L	1	9/30/2014 2:20:13 PM	R21559
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.011	0.0050	*	mg/L	5	10/2/2014 3:11:59 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:17:32 PM	15445
Selenium	0.0086	0.0050		mg/L	5	10/2/2014 3:11:59 PM	15445
Uranium	0.0015	0.0010		mg/L	1	10/2/2014 2:17:32 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:24:46 PM	15531

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-1

Project: 2014 Annual GW

Collection Date: 9/18/2014 3:00:00 PM

Lab ID: 1409A34-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Aniline	21	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4-Dimethylphenol	37	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-1

Project: 2014 Annual GW

Collection Date: 9/18/2014 3:00:00 PM

Lab ID: 1409A34-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1-Methylnaphthalene	71	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Methylnaphthalene	61	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Methylphenol	50	20		µg/L	1	9/24/2014 7:55:51 PM	15440
3+4-Methylphenol	62	10		µg/L	1	9/24/2014 7:55:51 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Naphthalene	130	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Phenol	44	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Surr: 2-Fluorophenol	57.8	12.1-85.8		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: Phenol-d5	73.0	17.7-65.8	S	%REC	1	9/24/2014 7:55:51 PM	15440
Surr: 2,4,6-Tribromophenol	87.8	26-138		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: Nitrobenzene-d5	83.3	47.5-119		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: 2-Fluorobiphenyl	94.4	48.1-106		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: 4-Terphenyl-d14	96.9	44-113		%REC	1	9/24/2014 7:55:51 PM	15440

EPA METHOD 8260B: VOLATILES

Analyst: KJH

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-1

Project: 2014 Annual GW

Collection Date: 9/18/2014 3:00:00 PM

Lab ID: 1409A34-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	37000	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Toluene	35000	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Ethylbenzene	1800	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Methyl tert-butyl ether (MTBE)	1200	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,4-Trimethylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,3,5-Trimethylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dichloroethane (EDC)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dibromoethane (EDB)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Naphthalene	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1-Methylnaphthalene	ND	4000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Methylnaphthalene	ND	4000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Acetone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromodichloromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromoform	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromomethane	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Butanone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Carbon disulfide	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Carbon Tetrachloride	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chloroethane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chloroform	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chloromethane	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Chlorotoluene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
4-Chlorotoluene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
cis-1,2-DCE	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
cis-1,3-Dichloropropene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dibromo-3-chloropropane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Dibromochloromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Dibromomethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,3-Dichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,4-Dichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Dichlorodifluoromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1-Dichloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1-Dichloroethene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dichloropropane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,3-Dichloropropane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2,2-Dichloropropane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: RW-1

Project: 2014 Annual GW

Collection Date: 9/18/2014 3:00:00 PM

Lab ID: 1409A34-004

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,1-Dichloropropene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Hexachlorobutadiene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Hexanone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Isopropylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
4-Isopropyltoluene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
4-Methyl-2-pentanone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Methylene Chloride	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
n-Butylbenzene	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
n-Propylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
sec-Butylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Styrene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
tert-Butylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Tetrachloroethene (PCE)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
trans-1,2-DCE	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
trans-1,3-Dichloropropene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,3-Trichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,4-Trichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,1-Trichloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,2-Trichloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Trichloroethene (TCE)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Trichlorofluoromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,3-Trichloropropane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Vinyl chloride	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Xylenes, Total	10000	1500		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.1	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507
Surr: Dibromofluoromethane	90.8	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507
Surr: Toluene-d8	90.1	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409A34-005

Matrix: TRIP BLANK

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 6:32:24 PM	R21468
Surr: BFB	83.9	70.9-130		%REC	1	9/25/2014 6:32:24 PM	R21468
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Toluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Naphthalene	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Acetone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromoform	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromomethane	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Butanone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Carbon disulfide	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chloroethane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chloroform	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chloromethane	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Dibromomethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: TRIP BLANK

Project: 2014 Annual GW

Collection Date:

Lab ID: 1409A34-005

Matrix: TRIP BLANK

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Hexanone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Methylene Chloride	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Styrene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Vinyl chloride	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Xylenes, Total	ND	1.5		µg/L	1	9/29/2014 7:07:41 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507
Surr: Dibromofluoromethane	92.2	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507
Surr: Toluene-d8	92.2	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 8-9/18/14

Project: 2014 Annual GW

Collection Date: 9/18/2014 12:35:00 PM

Lab ID: 1409A34-006

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Toluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Naphthalene	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Acetone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromoform	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromomethane	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Butanone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Carbon disulfide	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chloroethane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chloroform	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chloromethane	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Dibromomethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A34**

Date Reported: **10/7/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: FB-Group 8-9/18/14

Project: 2014 Annual GW

Collection Date: 9/18/2014 12:35:00 PM

Lab ID: 1409A34-006

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Hexanone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Methylene Chloride	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Styrene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Vinyl chloride	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Xylenes, Total	ND	1.5		µg/L	1	9/29/2014 7:37:14 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.8	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507
Surr: 4-Bromofluorobenzene	95.3	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507
Surr: Dibromofluoromethane	90.7	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507
Surr: Toluene-d8	91.7	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-30

Project: 2014 Annual GW

Collection Date: 9/17/2014 6:30:00 PM

Lab ID: 1409A34-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE							Analyst: BCN
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 2:03:02 PM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 2:03:02 PM	15424
Surr: DNOP	104	59-141		%REC	1	9/23/2014 2:03:02 PM	15424
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1.3	0.25		mg/L	5	9/25/2014 7:02:37 PM	R21468
Surr: BFB	91.3	70.9-130		%REC	5	9/25/2014 7:02:37 PM	R21468
EPA METHOD 300.0: ANIONS							Analyst: JRR
Fluoride	0.20	0.10		mg/L	1	9/22/2014 9:56:05 PM	R21368
Chloride	180	10		mg/L	20	9/22/2014 10:08:30 PM	R21368
Bromide	0.63	0.10		mg/L	1	9/22/2014 9:56:05 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 9:56:05 PM	R21368
Sulfate	45	10		mg/L	20	9/22/2014 10:08:30 PM	R21368
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/23/2014 1:51:54 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS							Analyst: JLF
Barium	0.086	0.0020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Calcium	68	1.0		mg/L	1	9/25/2014 3:45:34 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:45:34 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:45:34 PM	R21450
Iron	0.067	0.020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Magnesium	15	1.0		mg/L	1	9/25/2014 3:45:34 PM	R21450
Manganese	0.033	0.0020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Potassium	1.2	1.0		mg/L	1	9/25/2014 3:45:34 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:45:34 PM	R21450
Sodium	390	10		mg/L	10	9/25/2014 5:33:22 PM	R21450
Zinc	0.012	0.010		mg/L	1	9/25/2014 3:45:34 PM	R21450
EPA METHOD 200.7: TOTAL METALS							Analyst: JLF
Barium	0.087	0.0020		mg/L	1	9/25/2014 3:22:12 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:22:12 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:22:12 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:22:12 PM	15445
Iron	0.076	0.020		mg/L	1	9/25/2014 3:22:12 PM	15445
Manganese	0.031	0.0020		mg/L	1	9/25/2014 3:22:12 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:22:12 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:22:12 PM	15445
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Arsenic	ND	0.0050		mg/L	5	10/2/2014 5:22:55 PM	R21629

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-30

Project: 2014 Annual GW

Collection Date: 9/17/2014 6:30:00 PM

Lab ID: 1409A34-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBD
Lead	ND	0.0050		mg/L	5	10/2/2014 5:22:55 PM	R21629
Selenium	ND	0.0050		mg/L	5	10/2/2014 5:22:55 PM	R21629
Uranium	0.049	0.0050	*	mg/L	5	10/2/2014 5:22:55 PM	R21629
200.8 ICPMS METALS:TOTAL							Analyst: DBD
Arsenic	0.0015	0.0010		mg/L	1	10/2/2014 2:20:38 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:20:38 PM	15445
Selenium	0.0034	0.0010		mg/L	1	10/2/2014 2:20:38 PM	15445
Uranium	0.051	0.0050	*	mg/L	5	10/2/2014 3:15:05 PM	15445
EPA METHOD 245.1: MERCURY							Analyst: MMD
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:26:31 PM	15531
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-30

Project: 2014 Annual GW

Collection Date: 9/17/2014 6:30:00 PM

Lab ID: 1409A34-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Naphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-30

Project: 2014 Annual GW

Collection Date: 9/17/2014 6:30:00 PM

Lab ID: 1409A34-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Pyrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Surr: 2-Fluorophenol	70.6	12.1-85.8		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: Phenol-d5	63.4	17.7-65.8		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: 2,4,6-Tribromophenol	71.5	26-138		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: Nitrobenzene-d5	87.6	47.5-119		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: 2-Fluorobiphenyl	84.1	48.1-106		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: 4-Terphenyl-d14	90.2	44-113		%REC	1	9/24/2014 8:24:50 PM	15440
EPA METHOD 8260B: VOLATILES							Analyst: KJH
Benzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Toluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Methyl tert-butyl ether (MTBE)	2800	50		µg/L	50	9/29/2014 8:06:49 PM	R21507
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Naphthalene	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Acetone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromoform	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromomethane	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Butanone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Carbon disulfide	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chloroethane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chloroform	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chloromethane	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-30

Project: 2014 Annual GW

Collection Date: 9/17/2014 6:30:00 PM

Lab ID: 1409A34-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES				Analyst: KJH			
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Dibromomethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Hexanone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Methylene Chloride	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Styrene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Vinyl chloride	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Xylenes, Total	ND	1.5		µg/L	1	9/29/2014 8:36:23 PM	R21507
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A34**

Date Reported: **10/7/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-30

Project: 2014 Annual GW

Collection Date: 9/17/2014 6:30:00 PM

Lab ID: 1409A34-007

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: KJH	
Surr: 4-Bromofluorobenzene	99.9	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507
Surr: Dibromofluoromethane	95.1	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507
Surr: Toluene-d8	91.5	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 30 of 53
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2A

Project: 2014 Annual GW

Collection Date: 9/17/2014 10:05:00 AM

Lab ID: 1409A34-008

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JDC
Acenaphthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2A

Project: 2014 Annual GW

Collection Date: 9/17/2014 10:05:00 AM

Lab ID: 1409A34-008

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Naphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Surr: 2-Fluorophenol	73.2	12.1-85.8		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: Phenol-d5	65.9	17.7-65.8	S	%REC	1	9/24/2014 8:53:46 PM	15440
Surr: 2,4,6-Tribromophenol	73.2	26-138		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: Nitrobenzene-d5	94.3	47.5-119		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: 2-Fluorobiphenyl	90.1	48.1-106		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: 4-Terphenyl-d14	92.5	44-113		%REC	1	9/24/2014 8:53:46 PM	15440

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1409A34

Date Reported: 10/7/2014

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2B

Project: 2014 Annual GW

Collection Date: 9/17/2014 10:00:00 AM

Lab ID: 1409A34-009

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC	
Acenaphthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
3,3'-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1409A34**

Date Reported: **10/7/2014**

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: BW-2B

Project: 2014 Annual GW

Collection Date: 9/17/2014 10:00:00 AM

Lab ID: 1409A34-009

Matrix: AQUEOUS

Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES				Analyst: JDC			
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Naphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Surr: 2-Fluorophenol	63.8	12.1-85.8		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: Phenol-d5	56.9	17.7-65.8		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: 2,4,6-Tribromophenol	64.5	26-138		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: Nitrobenzene-d5	77.2	47.5-119		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: 2-Fluorobiphenyl	73.2	48.1-106		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: 4-Terphenyl-d14	82.1	44-113		%REC	1	9/24/2014 9:22:52 PM	15440

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID: R21450			RunNo: 21450					
Prep Date:		Analysis Date: 9/25/2014			SeqNo: 626978		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		SampType: LCS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW		Batch ID: R21450		RunNo: 21450					
Prep Date:			Analysis Date: 9/25/2014		SeqNo: 626979		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	95.6	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.6	85	115			
Calcium	49	1.0	50.00	0	98.4	85	115			
Chromium	0.47	0.0060	0.5000	0	93.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.1	85	115			
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Magnesium	49	1.0	50.00	0	98.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Potassium	49	1.0	50.00	0	97.2	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.49	0.010	0.5000	0	97.1	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15445		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	15445		RunNo:	21391			
Prep Date:	9/23/2014		Analysis Date:	9/23/2014		SeqNo:	624989		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-15445		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	15445		RunNo:	21391			
Prep Date:	9/23/2014		Analysis Date:	9/23/2014		SeqNo:	624990		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.49	0.0060	0.5000	0	97.7	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Manganese	0.50	0.0020	0.5000	0	99.8	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID	1409A34-001EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	RW-6		Batch ID:	15445		RunNo:	21450			
Prep Date:	9/23/2014		Analysis Date:	9/25/2014		SeqNo:	627835		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	100	70	130			
Chromium	0.49	0.0060	0.5000	0	98.3	70	130			
Copper	0.52	0.0060	0.5000	0	103	70	130			
Silver	0.10	0.0050	0.1000	0	104	70	130			
Zinc	0.51	0.010	0.5000	0.005540	102	70	130			

Sample ID	1409A34-001EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	RW-6		Batch ID:	15445		RunNo:	21450			
Prep Date:	9/23/2014		Analysis Date:	9/25/2014		SeqNo:	627836		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	101	70	130	0.479	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409A34-001EMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	RW-6		Batch ID: 15445		RunNo: 21450					
Prep Date:	9/23/2014		Analysis Date: 9/25/2014		SeqNo: 627836		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.50	0.0060	0.5000	0	99.3	70	130	0.945	20	
Copper	0.52	0.0060	0.5000	0	104	70	130	0.350	20	
Silver	0.11	0.0050	0.1000	0	106	70	130	1.91	20	
Zinc	0.52	0.010	0.5000	0.005540	103	70	130	1.01	20	

Sample ID	1409A34-001EMS		SampType: MS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	RW-6		Batch ID: 15445		RunNo: 21450					
Prep Date:	9/23/2014		Analysis Date: 9/25/2014		SeqNo: 627924		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.7	0.010	0.5000	3.269	87.2	70	130			
Manganese	1.3	0.010	0.5000	0.7888	102	70	130			

Sample ID	1409A34-001EMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	RW-6		Batch ID: 15445		RunNo: 21450					
Prep Date:	9/23/2014		Analysis Date: 9/25/2014		SeqNo: 627928		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.8	0.010	0.5000	3.269	97.3	70	130	1.36	20	
Manganese	1.3	0.010	0.5000	0.7888	105	70	130	1.35	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409A34-001FMS			SampType:	MS			TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	RW-6			Batch ID:	R21559			RunNo:	21559		
Prep Date:				Analysis Date:	9/30/2014			SeqNo:	631525		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.029	0.0010	0.02500	0.004883	95.2	70	130				
Uranium	0.027	0.0010	0.02500	.00009143	106	70	130				

Sample ID	1409A34-001FMSD			SampType:	MSD			TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	RW-6			Batch ID:	R21559			RunNo:	21559		
Prep Date:				Analysis Date:	9/30/2014			SeqNo:	631526		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.029	0.0010	0.02500	0.004883	96.2	70	130	0.883	20		
Uranium	0.027	0.0010	0.02500	.00009143	106	70	130	0.526	20		

Sample ID	LCS			SampType:	LCS			TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	LCSW			Batch ID:	R21559			RunNo:	21559		
Prep Date:				Analysis Date:	9/30/2014			SeqNo:	631540		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.023	0.0010	0.02500	0	92.9	85	115				
Uranium	0.024	0.0010	0.02500	0	94.8	85	115				

Sample ID	MB			SampType:	MBLK			TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	PBW			Batch ID:	R21559			RunNo:	21559		
Prep Date:				Analysis Date:	9/30/2014			SeqNo:	631542		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	ND	0.0010									
Uranium	ND	0.0010									

Sample ID	LCS			SampType:	LCS			TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	LCSW			Batch ID:	R21559			RunNo:	21559		
Prep Date:				Analysis Date:	9/30/2014			SeqNo:	631545		
								Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Lead	0.023	0.0010	0.02500	0	90.3	85	115				
Uranium	0.023	0.0010	0.02500	0	92.2	85	115				

Sample ID	MB			SampType:	MBLK			TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	PBW			Batch ID:	R21559			RunNo:	21559		
Prep Date:				Analysis Date:	9/30/2014			SeqNo:	631546		
								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 |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: R21559		RunNo: 21559							
Prep Date:	Analysis Date: 9/30/2014		SeqNo: 631546		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID 1409A34-001FMS	SampType: MS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: RW-6	Batch ID: R21629		RunNo: 21629							
Prep Date:	Analysis Date: 10/2/2014		SeqNo: 634376		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.01364	95.3	70	130			
Selenium	0.12	0.0050	0.1250	0.001913	96.2	70	130			

Sample ID 1409A34-001FMSD	SampType: MSD		TestCode: EPA 200.8: Dissolved Metals							
Client ID: RW-6	Batch ID: R21629		RunNo: 21629							
Prep Date:	Analysis Date: 10/2/2014		SeqNo: 634377		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.01364	95.7	70	130	0.354	20	
Selenium	0.12	0.0050	0.1250	0.001913	94.1	70	130	2.16	20	

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21629		RunNo: 21629							
Prep Date:	Analysis Date: 10/2/2014		SeqNo: 634388		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.7	85	115			
Lead	0.024	0.0010	0.02500	0	94.8	85	115			
Selenium	0.022	0.0010	0.02500	0	89.3	85	115			
Uranium	0.024	0.0010	0.02500	0	94.5	85	115			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: R21629		RunNo: 21629							
Prep Date:	Analysis Date: 10/2/2014		SeqNo: 634389		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	94.9	85	115			
Lead	0.024	0.0010	0.02500	0	95.2	85	115			
Selenium	0.023	0.0010	0.02500	0	92.8	85	115			
Uranium	0.024	0.0010	0.02500	0	96.2	85	115			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R21629	RunNo:	21629					
Prep Date:		Analysis Date:	10/2/2014	SeqNo:	634390	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R21629	RunNo:	21629					
Prep Date:		Analysis Date:	10/2/2014	SeqNo:	634391	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409A34-007FLLMS		SampType: MSLL		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	OW-30		Batch ID: 15445		RunNo: 21619					
Prep Date:	9/23/2014		Analysis Date: 10/2/2014		SeqNo: 634146		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.028	0.0050	0.02500	0	111	70	130			
Uranium	0.081	0.0050	0.02500	0.05121	118	70	130			

Sample ID	1409A34-007FLLMS		SampType:	MSLL		TestCode:	200.8 ICPMS Metals:Total				
Client ID:	OW-30		Batch ID:	15445		RunNo:	21619				
Prep Date:	9/23/2014		Analysis Date:	10/2/2014		SeqNo:	634147		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.027	0.0010	0.02500	0.001494	103	70	130				
Lead	0.028	0.0010	0.02500	0	112	70	130				
Selenium	0.028	0.0010	0.02500	0.003369	97.2	70	130				

Sample ID	1409A34-007FLLMS		SampType:	MSDLL		TestCode:	200.8 ICPMS Metals:Total				
Client ID:	OW-30		Batch ID:	15445		RunNo:	21619				
Prep Date:	9/23/2014		Analysis Date:	10/2/2014		SeqNo:	634148		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.027	0.0050	0.02500	0	108	70	130	3.07	20		
Uranium	0.080	0.0050	0.02500	0.05121	115	70	130	0.918	20		

Sample ID	1409A34-007FLLMS		SampType: MSDLL		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	OW-30		Batch ID: 15445		RunNo: 21619					
Prep Date:	9/23/2014		Analysis Date: 10/2/2014		SeqNo: 634149		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.001494	101	70	130	1.76	20	
Lead	0.027	0.0010	0.02500	0	109	70	130	2.24	20	
Selenium	0.027	0.0010	0.02500	0.003369	96.5	70	130	0.664	20	

Sample ID	LLLCS-15445	SampType: LCSLL			TestCode: 200.8 ICPMS Metals:Total					
Client ID:	BatchQC	Batch ID: 15445			RunNo: 21619					
Prep Date:	9/23/2014	Analysis Date: 10/2/2014			SeqNo: 634155		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.027	0.0010	0.02500	0	107	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Uranium	0.027	0.0010	0.02500	0	106	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15445		SampType: MBLK		TestCode: 200.8 ICPMS Metals:Total					
Client ID:	PBW		Batch ID: 15445		RunNo: 21619					
Prep Date:	9/23/2014		Analysis Date: 10/2/2014		SeqNo: 634158		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15531	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	15531	RunNo:	21492					
Prep Date:	9/26/2014	Analysis Date:	9/26/2014	SeqNo:	628445	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-15531	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	15531	RunNo:	21492					
Prep Date:	9/26/2014	Analysis Date:	9/26/2014	SeqNo:	628446	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0056	0.00020	0.005000	0	111	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623985	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	623986	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.1	90	110			
Sulfate	9.7	0.50	10.00	0	97.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.5	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	624032	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R21368	RunNo:	21368					
Prep Date:		Analysis Date:	9/22/2014	SeqNo:	624033	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.4	90	110			
Chloride	4.6	0.50	5.000	0	91.7	90	110			
Bromide	2.4	0.10	2.500	0	94.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.4	90	110			
Sulfate	9.4	0.50	10.00	0	93.8	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.6	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	MB-15424	SampType: MBLK			TestCode: EPA Method 8015D: Diesel Range					
Client ID:	PBW	Batch ID: 15424			RunNo: 21369					
Prep Date:	9/22/2014	Analysis Date: 9/23/2014			SeqNo: 624234		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	0.94		1.000		93.9	59	141			

Sample ID	LCS-15424		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range					
Client ID:	LCSW		Batch ID: 15424		RunNo: 21369					
Prep Date:	9/22/2014		Analysis Date: 9/23/2014		SeqNo: 624235		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.5	1.0	5.000	0	130	69.7	142			
Surr: DNOP	0.55		0.5000		110	59	141			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID 5ML RB	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBW	Batch ID: R21431			RunNo: 21431						
Prep Date:	Analysis Date: 9/24/2014			SeqNo: 626176		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		89.2	70.9	130			

Sample ID 2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSW	Batch ID: R21431			RunNo: 21431						
Prep Date:	Analysis Date: 9/24/2014			SeqNo: 626182		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	104	80	120			
Surr: BFB	19		20.00		95.6	70.9	130			

Sample ID 5ML RB	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBW	Batch ID: R21468			RunNo: 21468						
Prep Date:	Analysis Date: 9/25/2014			SeqNo: 627652		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	17		20.00		82.8	70.9	130			

Sample ID 2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSW	Batch ID: R21468			RunNo: 21468						
Prep Date:	Analysis Date: 9/25/2014			SeqNo: 627653		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.4	80	120			
Surr: BFB	19		20.00		94.7	70.9	130			

Sample ID 1409A34-004BMS	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: RW-1	Batch ID: R21468			RunNo: 21468						
Prep Date:	Analysis Date: 9/25/2014			SeqNo: 627667		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	390	25	250.0	152.9	95.4	70.4	127			
Surr: BFB	9900		10000		99.2	70.9	130			

Sample ID 1409A34-004BMSD	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: RW-1	Batch ID: R21468			RunNo: 21468						
Prep Date:	Analysis Date: 9/25/2014			SeqNo: 627668		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 |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	1409A34-004BMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	RW-1	Batch ID:	R21468	RunNo:	21468					
Prep Date:		Analysis Date:	9/25/2014	SeqNo:	627668	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	390	25	250.0	152.9	93.6	70.4	127	1.16	20	
Surr: BFB	9800		10000		97.8	70.9	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21507			RunNo: 21507					
Prep Date:		Analysis Date: 9/29/2014			SeqNo: 629602		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	5mL-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R21507			RunNo: 21507					
Prep Date:		Analysis Date: 9/29/2014			SeqNo: 629602		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: Toluene-d8	9.2		10.00		92.4	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R21507			RunNo: 21507					
Prep Date:		Analysis Date: 9/29/2014			SeqNo: 629604		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.5	70	130			
Toluene	19	1.0	20.00	0	96.4	80	120			
Chlorobenzene	18	1.0	20.00	0	91.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit	P Sample pH greater than 2.
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R21507		RunNo: 21507							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629604		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	112	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	90.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.1	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID 1409A34-001a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: RW-6	Batch ID: R21507		RunNo: 21507							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629613		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	740	10	200.0	466.1	139	70	130			S
Toluene	440	10	200.0	234.3	104	70	130			
Chlorobenzene	190	10	200.0	0	95.3	70	130			
1,1-Dichloroethene	230	10	200.0	0	113	70	130			
Trichloroethene (TCE)	190	10	200.0	2.020	92.2	70	130			
Surr: 1,2-Dichloroethane-d4	92		100.0		92.2	70	130			
Surr: 4-Bromofluorobenzene	100		100.0		100	70	130			
Surr: Dibromofluoromethane	95		100.0		95.3	70	130			
Surr: Toluene-d8	97		100.0		96.6	70	130			

Sample ID 1409A34-001a msd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: RW-6	Batch ID: R21507		RunNo: 21507							
Prep Date:	Analysis Date: 9/29/2014		SeqNo: 629614		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	670	10	200.0	466.1	99.5	70	130	11.3	20	
Toluene	430	10	200.0	234.3	99.6	70	130	1.87	20	
Chlorobenzene	190	10	200.0	0	94.8	70	130	0.515	20	
1,1-Dichloroethene	210	10	200.0	0	105	70	130	7.62	20	
Trichloroethene (TCE)	180	10	200.0	2.020	87.0	70	130	5.68	20	
Surr: 1,2-Dichloroethane-d4	92		100.0		92.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	100		100.0		100	70	130	0	0	
Surr: Dibromofluoromethane	91		100.0		91.1	70	130	0	0	
Surr: Toluene-d8	97		100.0		96.9	70	130	0	0	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15440	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15440	RunNo:	21434					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626587	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	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
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								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	mb-15440	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	15440	RunNo:	21434					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626587	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
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	160		200.0		78.4	12.1	85.8			
Surr: Phenol-d5	140		200.0		67.7	17.7	65.8			S
Surr: 2,4,6-Tribromophenol	150		200.0		75.5	26	138			
Surr: Nitrobenzene-d5	87		100.0		87.5	47.5	119			
Surr: 2-Fluorobiphenyl	84		100.0		83.6	48.1	106			
Surr: 4-Terphenyl-d14	88		100.0		87.9	44	113			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409A34

07-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	lcs-15440		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 15440		RunNo: 21434					
Prep Date:	9/23/2014		Analysis Date: 9/24/2014		SeqNo: 626588		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	83.1	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	88.5	51.7	122			
2-Chlorophenol	170	10	200.0	0	85.6	40.7	113			
1,4-Dichlorobenzene	69	10	100.0	0	69.4	39.6	99.9			
2,4-Dinitrotoluene	79	10	100.0	0	78.9	40.8	113			
N-Nitrosodi-n-propylamine	79	10	100.0	0	78.8	51.2	111			
4-Nitrophenol	140	10	200.0	0	71.5	15.7	86.9			
Pentachlorophenol	120	20	200.0	0	60.9	21.6	104			
Phenol	150	10	200.0	0	73.2	28.6	71.7			S
Pyrene	84	10	100.0	0	84.3	54.2	128			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.1	40.9	101			
Surr: 2-Fluorophenol	150		200.0		74.6	12.1	85.8			
Surr: Phenol-d5	130		200.0		67.4	17.7	65.8			S
Surr: 2,4,6-Tribromophenol	150		200.0		73.1	26	138			
Surr: Nitrobenzene-d5	86		100.0		86.1	47.5	119			
Surr: 2-Fluorobiphenyl	81		100.0		80.9	48.1	106			
Surr: 4-Terphenyl-d14	82		100.0		82.2	44	113			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **Western Refining Gallup**

Work Order Number: **1409A34**

RcptNo: 1

Received by/date:

AT 09/19/14

Logged By: **Ashley Gallegos**

9/19/2014 12:45:00 PM

AG

Completed By: **Ashley Gallegos**

9/22/2014 10:49:04 AM

AG

Reviewed By:

VMS mg 09/22/14

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 ☐ *09/22/14*
10. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met? Yes ☒ No ☐
(If no, notify customer for authorization.)

of preserved bottles checked for pH: 01

Adjusted? yes

Checked by: *mg*

Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks: *For Metals Analysis: Added 1 mL HNO₃ to -04E for acceptable pH. Held in login for 24 hours. mg 09/22/14*
18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			