AP - 111

ANNUAL GW MONITORING REPORT (7 of 29)

2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-02-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 12:50:00 PM
Lab ID: 1606995-002 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chloroethane	ND	0.0099	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Chloroform	ND	0.0038	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Chloromethane	0.080	0.0044	0.15	J	mg/Kg	1	6/20/2016 8:29:59 PM	25923
2-Chlorotoluene	ND	0.0037	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
4-Chlorotoluene	ND	0.0044	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
cis-1,2-DCE	ND	0.0029	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
cis-1,3-Dichloropropene	ND	0.0046	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,2-Dibromo-3-chloropropane	ND	0.015	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Dibromochloromethane	ND	0.0045	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Dibromomethane	ND	0.0043	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,2-Dichlorobenzene	ND	0.0043	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,3-Dichlorobenzene	ND	0.0041	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,4-Dichlorobenzene	ND	0.0062	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Dichlorodifluoromethane	ND	0.015	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,1-Dichloroethane	ND	0.0027	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,1-Dichloroethene	ND	0.016	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,2-Dichloropropane	ND	0.0042	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,3-Dichloropropane	ND	0.0057	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
2,2-Dichloropropane	ND	0.0029	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,1-Dichloropropene	ND	0.0040	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Hexachlorobutadiene	ND	0.0061	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
2-Hexanone	ND	0.027	0.50		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Isopropylbenzene	ND	0.0043	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
4-Isopropyltoluene	ND	0.0045	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
4-Methyl-2-pentanone	ND	0.015	0.50		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Methylene chloride	ND	0.014	0.15		mg/Kg	1	6/20/2016 8:29:59 PM	25923
n-Butylbenzene	ND	0.0044	0.15		mg/Kg	1	6/20/2016 8:29:59 PM	25923
n-Propylbenzene	ND	0.0038	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
sec-Butylbenzene	ND	0.0069	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Styrene	ND	0.0045	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
tert-Butylbenzene	ND	0.0041	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,1,1,2-Tetrachloroethane	ND	0.0048	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,1,2,2-Tetrachloroethane	ND	0.0081	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Tetrachloroethene (PCE)	ND	0.0041	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
trans-1,2-DCE	ND	0.014	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
trans-1,3-Dichloropropene	ND	0.0073	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,2,3-Trichlorobenzene	ND	0.0075	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,2,4-Trichlorobenzene	ND	0.0053	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,1,1-Trichloroethane	ND	0.0030	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-02-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 12:50:00 PM
Lab ID: 1606995-002
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,2-Trichloroethane	ND	0.0059	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Trichloroethene (TCE)	ND	0.0053	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Trichlorofluoromethane	ND	0.0037	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
1,2,3-Trichloropropane	ND	0.0086	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Vinyl chloride	ND	0.0041	0.050		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Xylenes, Total	ND	0.0094	0.10		mg/Kg	1	6/20/2016 8:29:59 PM	25923
Surr: Dibromofluoromethane	105		70-130		%Rec	1	6/20/2016 8:29:59 PM	25923
Surr: 1,2-Dichloroethane-d4	97.2		70-130		%Rec	1	6/20/2016 8:29:59 PM	25923
Surr: Toluene-d8	95.7		70-130		%Rec	1	6/20/2016 8:29:59 PM	25923
Surr: 4-Bromofluorobenzene	101		70-130		%Rec	1	6/20/2016 8:29:59 PM	25923
EPA METHOD 418.1: TPH							Analyst: **TOM**	
Petroleum Hydrocarbons, TR	ND	8.0	19		mg/Kg	1	6/23/2016	25996

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CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-03-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:20:00 PM
Lab ID: 1606995-003 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Fluoride	2.6	0.042	0.30		mg/Kg	1	6/27/2016 10:50:35 PM	26092
Chloride	570	12	30		mg/Kg	20	6/27/2016 11:02:59 PM	26092
Nitrogen, Nitrate (As N)	21	0.32	6.0		mg/Kg	20	6/27/2016 11:02:59 PM	26092
Sulfate	540	5.4	30		mg/Kg	20	6/27/2016 11:02:59 PM	26092
EPA METHOD 7471: MERCURY							Analyst: **DBD**	
Mercury	0.0048	0.00058	0.034	J	mg/Kg	1	6/28/2016 9:34:18 AM	26093
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	1.5	5.1		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Barium	220	0.099	0.20		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Cadmium	ND	0.13	0.20		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Chromium	11	0.26	0.61		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Copper	3.4	0.32	0.61		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Iron	17000	100	260		mg/Kg	100	6/30/2016 10:34:35 AM	26123
Lead	4.7	0.36	0.51		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Manganese	290	0.091	0.20		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Selenium	ND	2.2	5.1		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Silver	ND	0.065	0.51		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Uranium	ND	2.0	10		mg/Kg	2	6/30/2016 11:41:01 AM	26123
Zinc	18	1.2	5.1		mg/Kg	2	6/30/2016 11:41:01 AM	26123
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	0.086	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Acenaphthylene	ND	0.081	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Aniline	ND	0.095	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Anthracene	ND	0.066	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Azobenzene	ND	0.12	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Benz(a)anthracene	ND	0.086	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Benzo(a)pyrene	ND	0.076	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Benzo(b)fluoranthene	ND	0.090	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Benzo(g,h,i)perylene	ND	0.088	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Benzo(k)fluoranthene	ND	0.088	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Benzoic acid	ND	0.083	0.50		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Benzyl alcohol	ND	0.078	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Bis(2-chloroethoxy)methane	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Bis(2-chloroethyl)ether	ND	0.074	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Bis(2-chloroisopropyl)ether	ND	0.089	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Bis(2-ethylhexyl)phthalate	0.11	0.082	0.50	J	mg/Kg	1	6/30/2016 4:03:22 PM	26116
4-Bromophenyl phenyl ether	ND	0.096	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Butyl benzyl phthalate	ND	0.089	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116

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CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-03-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:20:00 PM
Lab ID: 1606995-003
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Carbazole	ND	0.068	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
4-Chloro-3-methylphenol	ND	0.12	0.50		mg/Kg	1	6/30/2016 4:03:22 PM	26116
4-Chloroaniline	ND	0.11	0.50		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2-Chloronaphthalene	ND	0.079	0.25		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2-Chlorophenol	ND	0.079	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
4-Chlorophenyl phenyl ether	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Chrysene	ND	0.085	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Di-n-butyl phthalate	ND	0.075	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Di-n-octyl phthalate	ND	0.085	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Dibenz(a,h)anthracene	ND	0.081	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Dibenzofuran	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
1,2-Dichlorobenzene	ND	0.077	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
1,3-Dichlorobenzene	ND	0.077	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
1,4-Dichlorobenzene	ND	0.085	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
3,3´-Dichlorobenzidine	ND	0.074	0.25		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Diethyl phthalate	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Dimethyl phthalate	ND	0.098	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2,4-Dichlorophenol	ND	0.093	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2,4-Dimethylphenol	ND	0.11	0.30		mg/Kg	1	6/30/2016 4:03:22 PM	26116
4,6-Dinitro-2-methylphenol	ND	0.060	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2,4-Dinitrophenol	ND	0.066	0.50		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2,4-Dinitrotoluene	ND	0.089	0.50		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2,6-Dinitrotoluene	ND	0.11	0.50		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Fluoranthene	ND	0.058	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Fluorene	ND	0.092	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Hexachlorobenzene	ND	0.079	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Hexachlorobutadiene	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Hexachlorocyclopentadiene	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Hexachloroethane	ND	0.086	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Indeno(1,2,3-cd)pyrene	ND	0.078	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
1-Methylnaphthalene	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2-Methylnaphthalene	ND	0.12	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2-Methylphenol	ND	0.084	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
3+4-Methylphenol	ND	0.072	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
N-Nitrosodi-n-propylamine	ND	0.096	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
N-Nitrosodiphenylamine	ND	0.098	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Naphthalene	ND	0.096	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2-Nitroaniline	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
3-Nitroaniline	ND	0.088	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116

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Qualifiers:

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CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-03-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:20:00 PM
Lab ID: 1606995-003 **Matrix:** SOIL **Received Date:** 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
4-Nitroaniline	ND	0.071	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Nitrobenzene	ND	0.10	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2-Nitrophenol	ND	0.099	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
4-Nitrophenol	ND	0.076	0.25		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Pentachlorophenol	ND	0.064	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Phenanthrene	ND	0.068	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Phenol	ND	0.075	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Pyrene	ND	0.076	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Pyridine	ND	0.079	0.40		mg/Kg	1	6/30/2016 4:03:22 PM	26116
1,2,4-Trichlorobenzene	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2,4,5-Trichlorophenol	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
2,4,6-Trichlorophenol	ND	0.083	0.20		mg/Kg	1	6/30/2016 4:03:22 PM	26116
Surr: 2-Fluorophenol	50.9	0	28.3-102		%Rec	1	6/30/2016 4:03:22 PM	26116
Surr: Phenol-d5	59.5	0	35.7-103		%Rec	1	6/30/2016 4:03:22 PM	26116
Surr: 2,4,6-Tribromophenol	73.1	0	35.2-108		%Rec	1	6/30/2016 4:03:22 PM	26116
Surr: Nitrobenzene-d5	59.0		24-118		%Rec	1	6/30/2016 4:03:22 PM	26116
Surr: 2-Fluorobiphenyl	72.0		35.4-111		%Rec	1	6/30/2016 4:03:22 PM	26116
Surr: 4-Terphenyl-d14	59.7		15-91.7		%Rec	1	6/30/2016 4:03:22 PM	26116
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.019	0.024		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Toluene	ND	0.0029	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Ethylbenzene	ND	0.0040	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Methyl tert-butyl ether (MTBE)	ND	0.015	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2,4-Trimethylbenzene	ND	0.0036	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,3,5-Trimethylbenzene	ND	0.0035	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2-Dichloroethane (EDC)	ND	0.013	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2-Dibromoethane (EDB)	ND	0.0034	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Naphthalene	ND	0.0076	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1-Methylnaphthalene	ND	0.011	0.19		mg/Kg	1	6/20/2016 9:55:03 PM	25923
2-Methylnaphthalene	ND	0.010	0.19		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Acetone	ND	0.063	0.73		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Bromobenzene	ND	0.0039	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Bromodichloromethane	ND	0.0028	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Bromoform	ND	0.0059	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Bromomethane	0.018	0.018	0.15	J	mg/Kg	1	6/20/2016 9:55:03 PM	25923
2-Butanone	ND	0.028	0.48		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Carbon disulfide	ND	0.016	0.48		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Carbon tetrachloride	ND	0.0032	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Chlorobenzene	ND	0.0039	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-03-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:20:00 PM
Lab ID: 1606995-003 **Matrix:** SOIL **Received Date:** 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chloroethane	ND	0.0096	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Chloroform	ND	0.0036	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Chloromethane	0.070	0.0043	0.15	J	mg/Kg	1	6/20/2016 9:55:03 PM	25923
2-Chlorotoluene	ND	0.0036	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
4-Chlorotoluene	ND	0.0043	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
cis-1,2-DCE	ND	0.0028	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
cis-1,3-Dichloropropene	ND	0.0045	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2-Dibromo-3-chloropropane	ND	0.015	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Dibromochloromethane	ND	0.0044	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Dibromomethane	ND	0.0042	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2-Dichlorobenzene	ND	0.0042	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,3-Dichlorobenzene	ND	0.0040	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,4-Dichlorobenzene	ND	0.0060	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Dichlorodifluoromethane	ND	0.015	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,1-Dichloroethane	ND	0.0026	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,1-Dichloroethene	ND	0.016	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2-Dichloropropane	ND	0.0041	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,3-Dichloropropane	ND	0.0055	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
2,2-Dichloropropane	ND	0.0028	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,1-Dichloropropene	ND	0.0038	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Hexachlorobutadiene	ND	0.0059	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
2-Hexanone	ND	0.026	0.48		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Isopropylbenzene	ND	0.0042	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
4-Isopropyltoluene	ND	0.0043	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
4-Methyl-2-pentanone	ND	0.014	0.48		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Methylene chloride	ND	0.014	0.15		mg/Kg	1	6/20/2016 9:55:03 PM	25923
n-Butylbenzene	ND	0.0043	0.15		mg/Kg	1	6/20/2016 9:55:03 PM	25923
n-Propylbenzene	ND	0.0037	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
sec-Butylbenzene	ND	0.0067	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Styrene	ND	0.0043	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
tert-Butylbenzene	ND	0.0040	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,1,1,2-Tetrachloroethane	ND	0.0046	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,1,2,2-Tetrachloroethane	ND	0.0078	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Tetrachloroethene (PCE)	ND	0.0040	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
trans-1,2-DCE	ND	0.014	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
trans-1,3-Dichloropropene	ND	0.0071	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2,3-Trichlorobenzene	ND	0.0072	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2,4-Trichlorobenzene	ND	0.0052	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,1,1-Trichloroethane	ND	0.0030	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-03-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:20:00 PM
Lab ID: 1606995-003
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,2-Trichloroethane	ND	0.0057	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Trichloroethene (TCE)	ND	0.0052	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Trichlorofluoromethane	ND	0.0036	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
1,2,3-Trichloropropane	ND	0.0084	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Vinyl chloride	ND	0.0040	0.048		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Xylenes, Total	ND	0.0092	0.097		mg/Kg	1	6/20/2016 9:55:03 PM	25923
Surr: Dibromofluoromethane	105		70-130		%Rec	1	6/20/2016 9:55:03 PM	25923
Surr: 1,2-Dichloroethane-d4	99.5		70-130		%Rec	1	6/20/2016 9:55:03 PM	25923
Surr: Toluene-d8	97.5		70-130		%Rec	1	6/20/2016 9:55:03 PM	25923
Surr: 4-Bromofluorobenzene	103		70-130		%Rec	1	6/20/2016 9:55:03 PM	25923
EPA METHOD 418.1: TPH							Analyst: **TOM**	
Petroleum Hydrocarbons, TR	ND	8.6	20		mg/Kg	1	6/23/2016	25996

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-04-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 11:45:00 AM
Lab ID: 1606995-004 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Fluoride	2.9	0.042	0.30		mg/Kg	1	6/27/2016 11:40:14 PM	26092
Chloride	170	12	30		mg/Kg	20	6/27/2016 11:52:38 PM	26092
Nitrogen, Nitrate (As N)	7.1	0.016	0.30		mg/Kg	1	6/27/2016 11:40:14 PM	26092
Sulfate	630	5.4	30		mg/Kg	20	6/27/2016 11:52:38 PM	26092
EPA METHOD 7471: MERCURY							Analyst: **DBD**	
Mercury	0.0042	0.00054	0.031	J	mg/Kg	1	6/28/2016 9:36:06 AM	26093
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	1.4	4.8		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Barium	200	0.093	0.19		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Cadmium	ND	0.12	0.19		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Chromium	9.5	0.24	0.57		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Copper	3.0	0.30	0.57		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Iron	15000	93	240		mg/Kg	100	6/30/2016 10:36:09 AM	26123
Lead	5.2	0.33	0.48		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Manganese	310	0.085	0.19		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Selenium	ND	2.1	4.8		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Silver	ND	0.061	0.48		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Uranium	ND	1.9	9.6		mg/Kg	2	6/30/2016 11:42:53 AM	26123
Zinc	15	1.1	4.8		mg/Kg	2	6/30/2016 11:42:53 AM	26123
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	0.085	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Acenaphthylene	ND	0.081	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Aniline	ND	0.094	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Anthracene	ND	0.066	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Azobenzene	ND	0.12	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Benz(a)anthracene	ND	0.086	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Benzo(a)pyrene	ND	0.075	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Benzo(b)fluoranthene	ND	0.090	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Benzo(g,h,i)perylene	ND	0.088	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Benzo(k)fluoranthene	ND	0.088	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Benzoic acid	ND	0.083	0.50		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Benzyl alcohol	ND	0.078	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Bis(2-chloroethoxy)methane	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Bis(2-chloroethyl)ether	ND	0.073	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Bis(2-chloroisopropyl)ether	ND	0.089	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Bis(2-ethylhexyl)phthalate	0.099	0.081	0.50	J	mg/Kg	1	6/30/2016 4:31:23 PM	26116
4-Bromophenyl phenyl ether	ND	0.095	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Butyl benzyl phthalate	ND	0.088	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-04-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 11:45:00 AM
Lab ID: 1606995-004 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Carbazole	ND	0.067	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
4-Chloro-3-methylphenol	ND	0.12	0.50		mg/Kg	1	6/30/2016 4:31:23 PM	26116
4-Chloroaniline	ND	0.11	0.50		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2-Chloronaphthalene	ND	0.078	0.25		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2-Chlorophenol	ND	0.078	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
4-Chlorophenyl phenyl ether	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Chrysene	ND	0.085	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Di-n-butyl phthalate	ND	0.074	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Di-n-octyl phthalate	ND	0.085	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Dibenz(a,h)anthracene	ND	0.080	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Dibenzofuran	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
1,2-Dichlorobenzene	ND	0.076	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
1,3-Dichlorobenzene	ND	0.077	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
1,4-Dichlorobenzene	ND	0.084	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
3,3´-Dichlorobenzidine	ND	0.073	0.25		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Diethyl phthalate	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Dimethyl phthalate	ND	0.097	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2,4-Dichlorophenol	ND	0.093	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2,4-Dimethylphenol	ND	0.11	0.30		mg/Kg	1	6/30/2016 4:31:23 PM	26116
4,6-Dinitro-2-methylphenol	ND	0.060	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2,4-Dinitrophenol	ND	0.066	0.50		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2,4-Dinitrotoluene	ND	0.089	0.50		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2,6-Dinitrotoluene	ND	0.11	0.50		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Fluoranthene	ND	0.057	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Fluorene	ND	0.091	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Hexachlorobenzene	ND	0.078	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Hexachlorobutadiene	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Hexachlorocyclopentadiene	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Hexachloroethane	ND	0.086	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Indeno(1,2,3-cd)pyrene	ND	0.078	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
1-Methylnaphthalene	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2-Methylnaphthalene	ND	0.12	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2-Methylphenol	ND	0.083	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
3+4-Methylphenol	ND	0.072	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
N-Nitrosodi-n-propylamine	ND	0.096	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
N-Nitrosodiphenylamine	ND	0.097	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Naphthalene	ND	0.096	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2-Nitroaniline	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
3-Nitroaniline	ND	0.088	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-04-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 11:45:00 AM
Lab ID: 1606995-004 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
4-Nitroaniline	ND	0.070	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Nitrobenzene	ND	0.10	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2-Nitrophenol	ND	0.099	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
4-Nitrophenol	ND	0.076	0.25		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Pentachlorophenol	ND	0.064	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Phenanthrene	ND	0.068	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Phenol	ND	0.075	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Pyrene	ND	0.075	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Pyridine	ND	0.079	0.40		mg/Kg	1	6/30/2016 4:31:23 PM	26116
1,2,4-Trichlorobenzene	ND	0.11	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2,4,5-Trichlorophenol	ND	0.10	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
2,4,6-Trichlorophenol	ND	0.083	0.20		mg/Kg	1	6/30/2016 4:31:23 PM	26116
Surr: 2-Fluorophenol	69.7	0	28.3-102		%Rec	1	6/30/2016 4:31:23 PM	26116
Surr: Phenol-d5	76.7	0	35.7-103		%Rec	1	6/30/2016 4:31:23 PM	26116
Surr: 2,4,6-Tribromophenol	84.1	0	35.2-108		%Rec	1	6/30/2016 4:31:23 PM	26116
Surr: Nitrobenzene-d5	81.5		24-118		%Rec	1	6/30/2016 4:31:23 PM	26116
Surr: 2-Fluorobiphenyl	84.2		35.4-111		%Rec	1	6/30/2016 4:31:23 PM	26116
Surr: 4-Terphenyl-d14	71.3		15-91.7		%Rec	1	6/30/2016 4:31:23 PM	26116
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.020	0.025		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Toluene	ND	0.0029	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Ethylbenzene	ND	0.0041	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Methyl tert-butyl ether (MTBE)	ND	0.016	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2,4-Trimethylbenzene	ND	0.0037	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,3,5-Trimethylbenzene	ND	0.0036	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2-Dichloroethane (EDC)	ND	0.013	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2-Dibromoethane (EDB)	ND	0.0035	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Naphthalene	ND	0.0078	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1-Methylnaphthalene	ND	0.011	0.20		mg/Kg	1	6/23/2016 12:50:04 PM	25923
2-Methylnaphthalene	ND	0.011	0.20		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Acetone	ND	0.064	0.75		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Bromobenzene	ND	0.0040	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Bromodichloromethane	ND	0.0029	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Bromoform	ND	0.0061	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Bromomethane	0.023	0.018	0.15	J	mg/Kg	1	6/23/2016 12:50:04 PM	25923
2-Butanone	ND	0.028	0.50		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Carbon disulfide	ND	0.016	0.50		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Carbon tetrachloride	ND	0.0033	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Chlorobenzene	ND	0.0040	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-04-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 11:45:00 AM
Lab ID: 1606995-004 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chloroethane	ND	0.0099	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Chloroform	ND	0.0038	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Chloromethane	0.065	0.0044	0.15	J	mg/Kg	1	6/23/2016 12:50:04 PM	25923
2-Chlorotoluene	ND	0.0037	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
4-Chlorotoluene	ND	0.0044	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
cis-1,2-DCE	ND	0.0029	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
cis-1,3-Dichloropropene	ND	0.0046	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2-Dibromo-3-chloropropane	ND	0.015	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Dibromochloromethane	ND	0.0045	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Dibromomethane	ND	0.0043	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2-Dichlorobenzene	ND	0.0043	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,3-Dichlorobenzene	ND	0.0041	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,4-Dichlorobenzene	ND	0.0062	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Dichlorodifluoromethane	ND	0.015	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,1-Dichloroethane	ND	0.0027	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,1-Dichloroethene	ND	0.016	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2-Dichloropropane	ND	0.0042	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,3-Dichloropropane	ND	0.0056	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
2,2-Dichloropropane	ND	0.0028	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,1-Dichloropropene	ND	0.0039	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Hexachlorobutadiene	ND	0.0061	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
2-Hexanone	ND	0.027	0.50		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Isopropylbenzene	ND	0.0043	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
4-Isopropyltoluene	ND	0.0045	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
4-Methyl-2-pentanone	ND	0.014	0.50		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Methylene chloride	ND	0.014	0.15		mg/Kg	1	6/23/2016 12:50:04 PM	25923
n-Butylbenzene	ND	0.0044	0.15		mg/Kg	1	6/23/2016 12:50:04 PM	25923
n-Propylbenzene	ND	0.0038	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
sec-Butylbenzene	ND	0.0069	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Styrene	ND	0.0044	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
tert-Butylbenzene	ND	0.0041	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,1,1,2-Tetrachloroethane	ND	0.0048	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,1,2,2-Tetrachloroethane	ND	0.0081	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Tetrachloroethene (PCE)	ND	0.0041	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
trans-1,2-DCE	ND	0.014	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
trans-1,3-Dichloropropene	ND	0.0073	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2,3-Trichlorobenzene	ND	0.0074	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2,4-Trichlorobenzene	ND	0.0053	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,1,1-Trichloroethane	ND	0.0030	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-04-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 11:45:00 AM
Lab ID: 1606995-004 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,2-Trichloroethane	ND	0.0059	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Trichloroethene (TCE)	ND	0.0053	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Trichlorofluoromethane	ND	0.0037	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
1,2,3-Trichloropropane	ND	0.0086	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Vinyl chloride	ND	0.0041	0.050		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Xylenes, Total	ND	0.0094	0.10		mg/Kg	1	6/23/2016 12:50:04 PM	25923
Surr: Dibromofluoromethane	99.8		70-130		%Rec	1	6/23/2016 12:50:04 PM	25923
Surr: 1,2-Dichloroethane-d4	102		70-130		%Rec	1	6/23/2016 12:50:04 PM	25923
Surr: Toluene-d8	92.8		70-130		%Rec	1	6/23/2016 12:50:04 PM	25923
Surr: 4-Bromofluorobenzene	103		70-130		%Rec	1	6/23/2016 12:50:04 PM	25923
EPA METHOD 418.1: TPH							Analyst: **TOM**	
Petroleum Hydrocarbons, TR	ND	8.0	19		mg/Kg	1	6/23/2016	25996

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016
Lab ID: 1606995-005
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Fluoride	2.7	0.042	0.30		mg/Kg	1	6/28/2016 12:05:03 AM	26092
Chloride	360	12	30		mg/Kg	20	6/28/2016 12:17:27 AM	26092
Nitrogen, Nitrate (As N)	3.0	0.016	0.30		mg/Kg	1	6/28/2016 12:05:03 AM	26092
Sulfate	770	5.4	30		mg/Kg	20	6/28/2016 12:17:27 AM	26092
EPA METHOD 7471: MERCURY							Analyst: **DBD**	
Mercury	0.0054	0.00053	0.031	J	mg/Kg	1	6/28/2016 9:37:56 AM	26093
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	ND	1.4	4.8		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Barium	190	0.094	0.19		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Cadmium	ND	0.12	0.19		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Chromium	11	0.24	0.58		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Copper	3.8	0.30	0.58		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Iron	15000	94	240		mg/Kg	100	6/30/2016 10:45:16 AM	26123
Lead	3.6	0.34	0.48		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Manganese	240	0.086	0.19		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Selenium	ND	2.1	4.8		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Silver	ND	0.061	0.48		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Uranium	ND	1.9	9.7		mg/Kg	2	6/30/2016 11:45:00 AM	26123
Zinc	17	1.1	4.8		mg/Kg	2	6/30/2016 11:45:00 AM	26123
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Acenaphthylene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Aniline	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Anthracene	ND	0.13	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Azobenzene	ND	0.24	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Benz(a)anthracene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Benzo(a)pyrene	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Benzo(b)fluoranthene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Benzo(g,h,i)perylene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Benzo(k)fluoranthene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Benzoic acid	ND	0.17	1.0	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Benzyl alcohol	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Bis(2-chloroethoxy)methane	ND	0.22	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Bis(2-chloroethyl)ether	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Bis(2-chloroisopropyl)ether	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Bis(2-ethylhexyl)phthalate	ND	0.16	1.0	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
4-Bromophenyl phenyl ether	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Butyl benzyl phthalate	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016
Lab ID: 1606995-005
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Carbazole	ND	0.14	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
4-Chloro-3-methylphenol	ND	0.24	1.0	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
4-Chloroaniline	ND	0.22	1.0	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2-Chloronaphthalene	ND	0.16	0.50	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2-Chlorophenol	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
4-Chlorophenyl phenyl ether	ND	0.23	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Chrysene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Di-n-butyl phthalate	0.16	0.15	0.80	JD	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Di-n-octyl phthalate	ND	0.17	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Dibenz(a,h)anthracene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Dibenzofuran	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
1,2-Dichlorobenzene	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
1,3-Dichlorobenzene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
1,4-Dichlorobenzene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
3,3´-Dichlorobenzidine	ND	0.15	0.50	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Diethyl phthalate	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Dimethyl phthalate	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2,4-Dichlorophenol	ND	0.19	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2,4-Dimethylphenol	ND	0.22	0.60	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
4,6-Dinitro-2-methylphenol	ND	0.12	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2,4-Dinitrophenol	ND	0.13	1.0	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2,4-Dinitrotoluene	ND	0.18	1.0	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2,6-Dinitrotoluene	ND	0.21	1.0	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Fluoranthene	ND	0.12	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Fluorene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Hexachlorobenzene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Hexachlorobutadiene	ND	0.23	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Hexachlorocyclopentadiene	ND	0.23	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Hexachloroethane	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Indeno(1,2,3-cd)pyrene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
1-Methylnaphthalene	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2-Methylnaphthalene	ND	0.24	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2-Methylphenol	ND	0.17	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
3+4-Methylphenol	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
N-Nitrosodi-n-propylamine	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
N-Nitrosodiphenylamine	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Naphthalene	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2-Nitroaniline	ND	0.22	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
3-Nitroaniline	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016
Lab ID: 1606995-005
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
4-Nitroaniline	ND	0.14	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Nitrobenzene	ND	0.21	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2-Nitrophenol	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
4-Nitrophenol	ND	0.15	0.50	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Pentachlorophenol	ND	0.13	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Phenanthrene	ND	0.14	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Phenol	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Pyrene	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Pyridine	ND	0.16	0.80	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
1,2,4-Trichlorobenzene	ND	0.22	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2,4,5-Trichlorophenol	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
2,4,6-Trichlorophenol	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 4:59:04 PM	26116
Surr: 2-Fluorophenol	63.7	0	28.3-102	D	%Rec	1	6/30/2016 4:59:04 PM	26116
Surr: Phenol-d5	66.9	0	35.7-103	D	%Rec	1	6/30/2016 4:59:04 PM	26116
Surr: 2,4,6-Tribromophenol	79.4	0	35.2-108	D	%Rec	1	6/30/2016 4:59:04 PM	26116
Surr: Nitrobenzene-d5	68.2		24-118	D	%Rec	1	6/30/2016 4:59:04 PM	26116
Surr: 2-Fluorobiphenyl	73.5		35.4-111	D	%Rec	1	6/30/2016 4:59:04 PM	26116
Surr: 4-Terphenyl-d14	102		15-91.7	SD	%Rec	1	6/30/2016 4:59:04 PM	26116
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.019	0.023		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Toluene	ND	0.0028	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Ethylbenzene	ND	0.0038	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Methyl tert-butyl ether (MTBE)	ND	0.015	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2,4-Trimethylbenzene	ND	0.0034	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,3,5-Trimethylbenzene	ND	0.0034	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2-Dichloroethane (EDC)	ND	0.012	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2-Dibromoethane (EDB)	ND	0.0033	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Naphthalene	ND	0.0073	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1-Methylnaphthalene	ND	0.010	0.19		mg/Kg	1	6/23/2016 1:18:39 PM	25923
2-Methylnaphthalene	ND	0.010	0.19		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Acetone	ND	0.060	0.70		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Bromobenzene	ND	0.0038	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Bromodichloromethane	ND	0.0027	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Bromoform	ND	0.0057	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Bromomethane	0.021	0.017	0.14	J	mg/Kg	1	6/23/2016 1:18:39 PM	25923
2-Butanone	ND	0.027	0.47		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Carbon disulfide	ND	0.015	0.47		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Carbon tetrachloride	ND	0.0031	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Chlorobenzene	ND	0.0038	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016
Lab ID: 1606995-005
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Chloroethane	ND	0.0093	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Chloroform	ND	0.0035	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Chloromethane	0.058	0.0041	0.14	J	mg/Kg	1	6/23/2016 1:18:39 PM	25923
2-Chlorotoluene	ND	0.0034	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
4-Chlorotoluene	ND	0.0041	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
cis-1,2-DCE	ND	0.0027	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
cis-1,3-Dichloropropene	ND	0.0043	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2-Dibromo-3-chloropropane	ND	0.014	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Dibromochloromethane	ND	0.0042	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Dibromomethane	ND	0.0040	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2-Dichlorobenzene	ND	0.0041	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,3-Dichlorobenzene	ND	0.0038	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,4-Dichlorobenzene	ND	0.0058	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Dichlorodifluoromethane	ND	0.014	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,1-Dichloroethane	ND	0.0025	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,1-Dichloroethene	ND	0.015	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2-Dichloropropane	ND	0.0039	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,3-Dichloropropane	ND	0.0053	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
2,2-Dichloropropane	ND	0.0027	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,1-Dichloropropene	ND	0.0037	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Hexachlorobutadiene	ND	0.0057	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
2-Hexanone	ND	0.025	0.47		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Isopropylbenzene	ND	0.0040	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
4-Isopropyltoluene	ND	0.0042	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
4-Methyl-2-pentanone	ND	0.014	0.47		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Methylene chloride	ND	0.013	0.14		mg/Kg	1	6/23/2016 1:18:39 PM	25923
n-Butylbenzene	ND	0.0041	0.14		mg/Kg	1	6/23/2016 1:18:39 PM	25923
n-Propylbenzene	ND	0.0036	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
sec-Butylbenzene	ND	0.0065	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Styrene	ND	0.0042	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
tert-Butylbenzene	ND	0.0039	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,1,1,2-Tetrachloroethane	ND	0.0045	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,1,2,2-Tetrachloroethane	ND	0.0076	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Tetrachloroethene (PCE)	ND	0.0039	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
trans-1,2-DCE	ND	0.013	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
trans-1,3-Dichloropropene	ND	0.0068	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2,3-Trichlorobenzene	ND	0.0070	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2,4-Trichlorobenzene	ND	0.0050	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,1,1-Trichloroethane	ND	0.0028	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016
Lab ID: 1606995-005
Matrix: SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,2-Trichloroethane	ND	0.0055	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Trichloroethene (TCE)	ND	0.0050	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Trichlorofluoromethane	ND	0.0035	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
1,2,3-Trichloropropane	ND	0.0081	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Vinyl chloride	ND	0.0038	0.047		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Xylenes, Total	ND	0.0088	0.093		mg/Kg	1	6/23/2016 1:18:39 PM	25923
Surr: Dibromofluoromethane	102		70-130		%Rec	1	6/23/2016 1:18:39 PM	25923
Surr: 1,2-Dichloroethane-d4	100		70-130		%Rec	1	6/23/2016 1:18:39 PM	25923
Surr: Toluene-d8	91.6		70-130		%Rec	1	6/23/2016 1:18:39 PM	25923
Surr: 4-Bromofluorobenzene	103		70-130		%Rec	1	6/23/2016 1:18:39 PM	25923
EPA METHOD 418.1: TPH							Analyst: **TOM**	
Petroleum Hydrocarbons, TR	ND	8.7	21		mg/Kg	1	6/23/2016	25996

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:40:00 PM
Lab ID: 1606995-006 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: **JME**	
Diesel Range Organics (DRO)	180	1.8	9.6		mg/Kg	1	6/23/2016 6:14:17 PM	25944
Motor Oil Range Organics (MRO)	200	48	48		mg/Kg	1	6/23/2016 6:14:17 PM	25944
Surr: DNOP	115	0	70-130		%Rec	1	6/23/2016 6:14:17 PM	25944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.96	4.6		mg/Kg	1	6/24/2016 7:46:24 PM	25923
Surr: BFB	86.5	0	80-120		%Rec	1	6/24/2016 7:46:24 PM	25923
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Fluoride	9.4	0.84	6.0		mg/Kg	20	6/28/2016 12:42:17 AM	26092
Chloride	290	12	30		mg/Kg	20	6/28/2016 12:42:17 AM	26092
Nitrogen, Nitrate (As N)	5.2	0.016	0.30		mg/Kg	1	6/28/2016 12:29:52 AM	26092
Sulfate	860	5.4	30		mg/Kg	20	6/28/2016 12:42:17 AM	26092
EPA METHOD 7471: MERCURY							Analyst: **DBD**	
Mercury	0.35	0.0011	0.064		mg/Kg	2	6/28/2016 9:45:27 AM	26093
EPA METHOD 6010B: SOIL METALS							Analyst: **MED**	
Arsenic	1.4	0.71	2.4	J	mg/Kg	1	6/30/2016 11:12:22 AM	26123
Barium	170	0.047	0.097		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Cadmium	ND	0.062	0.097		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Chromium	10	0.12	0.29		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Copper	8.9	0.15	0.29		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Iron	15000	95	240		mg/Kg	100	6/30/2016 10:46:51 AM	26123
Lead	9.0	0.17	0.24		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Manganese	280	0.086	0.19		mg/Kg	2	6/30/2016 11:46:55 AM	26123
Selenium	ND	1.1	2.4		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Silver	ND	0.031	0.24		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Uranium	ND	0.96	4.9		mg/Kg	1	6/30/2016 11:12:22 AM	26123
Zinc	38	0.55	2.4		mg/Kg	1	6/30/2016 11:12:22 AM	26123
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Acenaphthene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Acenaphthylene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Aniline	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Anthracene	ND	0.13	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Azobenzene	ND	0.24	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Benz(a)anthracene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Benzo(a)pyrene	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Benzo(b)fluoranthene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Benzo(g,h,i)perylene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Benzo(k)fluoranthene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:40:00 PM
Lab ID: 1606995-006 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
Benzoic acid	ND	0.17	1.0	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Benzyl alcohol	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Bis(2-chloroethoxy)methane	ND	0.22	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Bis(2-chloroethyl)ether	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Bis(2-chloroisopropyl)ether	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Bis(2-ethylhexyl)phthalate	0.18	0.16	1.0	JD	mg/Kg	1	6/30/2016 5:26:58 PM	26116
4-Bromophenyl phenyl ether	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Butyl benzyl phthalate	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Carbazole	ND	0.13	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
4-Chloro-3-methylphenol	ND	0.24	1.0	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
4-Chloroaniline	ND	0.22	1.0	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2-Chloronaphthalene	ND	0.16	0.50	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2-Chlorophenol	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
4-Chlorophenyl phenyl ether	ND	0.23	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Chrysene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Di-n-butyl phthalate	0.15	0.15	0.80	JD	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Di-n-octyl phthalate	ND	0.17	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Dibenz(a,h)anthracene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Dibenzofuran	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
1,2-Dichlorobenzene	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
1,3-Dichlorobenzene	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
1,4-Dichlorobenzene	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
3,3´-Dichlorobenzidine	ND	0.15	0.50	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Diethyl phthalate	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Dimethyl phthalate	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2,4-Dichlorophenol	ND	0.19	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2,4-Dimethylphenol	ND	0.22	0.60	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
4,6-Dinitro-2-methylphenol	ND	0.12	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2,4-Dinitrophenol	ND	0.13	1.0	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2,4-Dinitrotoluene	ND	0.18	1.0	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2,6-Dinitrotoluene	ND	0.21	1.0	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Fluoranthene	ND	0.11	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Fluorene	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Hexachlorobenzene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Hexachlorobutadiene	ND	0.22	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Hexachlorocyclopentadiene	ND	0.23	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Hexachloroethane	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Indeno(1,2,3-cd)pyrene	ND	0.16	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
1-Methylnaphthalene	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116

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

Qualifiers:

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

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:40:00 PM
Lab ID: 1606995-006 **Matrix:** SOIL **Received Date:** 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **JDC**	
2-Methylnaphthalene	ND	0.24	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2-Methylphenol	ND	0.17	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
3+4-Methylphenol	ND	0.14	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
N-Nitrosodi-n-propylamine	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
N-Nitrosodiphenylamine	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Naphthalene	ND	0.19	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2-Nitroaniline	ND	0.21	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
3-Nitroaniline	ND	0.18	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
4-Nitroaniline	ND	0.14	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Nitrobenzene	ND	0.21	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2-Nitrophenol	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
4-Nitrophenol	ND	0.15	0.50	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Pentachlorophenol	ND	0.13	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Phenanthrene	ND	0.14	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Phenol	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Pyrene	ND	0.15	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Pyridine	ND	0.16	0.80	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
1,2,4-Trichlorobenzene	ND	0.22	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2,4,5-Trichlorophenol	ND	0.20	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
2,4,6-Trichlorophenol	ND	0.17	0.40	D	mg/Kg	1	6/30/2016 5:26:58 PM	26116
Surr: 2-Fluorophenol	67.1	0	28.3-102	D	%Rec	1	6/30/2016 5:26:58 PM	26116
Surr: Phenol-d5	71.9	0	35.7-103	D	%Rec	1	6/30/2016 5:26:58 PM	26116
Surr: 2,4,6-Tribromophenol	80.0	0	35.2-108	D	%Rec	1	6/30/2016 5:26:58 PM	26116
Surr: Nitrobenzene-d5	75.6		24-118	D	%Rec	1	6/30/2016 5:26:58 PM	26116
Surr: 2-Fluorobiphenyl	86.3		35.4-111	D	%Rec	1	6/30/2016 5:26:58 PM	26116
Surr: 4-Terphenyl-d14	73.4		15-91.7	D	%Rec	1	6/30/2016 5:26:58 PM	26116
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.019	0.023		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Toluene	0.0090	0.0027	0.046	J	mg/Kg	1	6/23/2016 1:47:16 PM	25923
Ethylbenzene	ND	0.0038	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Methyl tert-butyl ether (MTBE)	ND	0.015	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2,4-Trimethylbenzene	ND	0.0034	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,3,5-Trimethylbenzene	ND	0.0034	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2-Dichloroethane (EDC)	ND	0.012	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2-Dibromoethane (EDB)	ND	0.0033	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Naphthalene	ND	0.0073	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1-Methylnaphthalene	ND	0.010	0.19		mg/Kg	1	6/23/2016 1:47:16 PM	25923
2-Methylnaphthalene	ND	0.0099	0.19		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Acetone	ND	0.060	0.70		mg/Kg	1	6/23/2016 1:47:16 PM	25923

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:40:00 PM
Lab ID: 1606995-006 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Bromobenzene	ND	0.0037	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Bromodichloromethane	ND	0.0027	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Bromoform	ND	0.0057	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Bromomethane	0.024	0.017	0.14	J	mg/Kg	1	6/23/2016 1:47:16 PM	25923
2-Butanone	0.070	0.027	0.46	J	mg/Kg	1	6/23/2016 1:47:16 PM	25923
Carbon disulfide	ND	0.015	0.46		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Carbon tetrachloride	ND	0.0030	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Chlorobenzene	ND	0.0038	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Chloroethane	ND	0.0093	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Chloroform	ND	0.0035	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Chloromethane	0.056	0.0041	0.14	J	mg/Kg	1	6/23/2016 1:47:16 PM	25923
2-Chlorotoluene	ND	0.0034	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
4-Chlorotoluene	ND	0.0041	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
cis-1,2-DCE	ND	0.0027	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
cis-1,3-Dichloropropene	ND	0.0043	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2-Dibromo-3-chloropropane	ND	0.014	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Dibromochloromethane	ND	0.0042	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Dibromomethane	ND	0.0040	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2-Dichlorobenzene	ND	0.0041	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,3-Dichlorobenzene	ND	0.0038	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,4-Dichlorobenzene	ND	0.0058	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Dichlorodifluoromethane	ND	0.014	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,1-Dichloroethane	ND	0.0025	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,1-Dichloroethene	ND	0.015	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2-Dichloropropane	ND	0.0039	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,3-Dichloropropane	ND	0.0053	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
2,2-Dichloropropane	ND	0.0027	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,1-Dichloropropene	ND	0.0037	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Hexachlorobutadiene	ND	0.0057	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
2-Hexanone	ND	0.025	0.46		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Isopropylbenzene	ND	0.0040	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
4-Isopropyltoluene	ND	0.0042	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
4-Methyl-2-pentanone	ND	0.014	0.46		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Methylene chloride	ND	0.013	0.14		mg/Kg	1	6/23/2016 1:47:16 PM	25923
n-Butylbenzene	ND	0.0041	0.14		mg/Kg	1	6/23/2016 1:47:16 PM	25923
n-Propylbenzene	ND	0.0036	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
sec-Butylbenzene	ND	0.0064	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Styrene	ND	0.0041	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
tert-Butylbenzene	ND	0.0038	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 1:40:00 PM
Lab ID: 1606995-006 **Matrix:** SOIL
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1,1,2-Tetrachloroethane	ND	0.0044	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,1,2,2-Tetrachloroethane	ND	0.0075	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Tetrachloroethene (PCE)	ND	0.0038	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
trans-1,2-DCE	ND	0.013	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
trans-1,3-Dichloropropene	ND	0.0068	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2,3-Trichlorobenzene	ND	0.0069	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2,4-Trichlorobenzene	ND	0.0050	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,1,1-Trichloroethane	ND	0.0028	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,1,2-Trichloroethane	ND	0.0055	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Trichloroethene (TCE)	ND	0.0050	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Trichlorofluoromethane	ND	0.0035	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
1,2,3-Trichloropropane	ND	0.0080	0.093		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Vinyl chloride	ND	0.0038	0.046		mg/Kg	1	6/23/2016 1:47:16 PM	25923
Xylenes, Total	0.010	0.0088	0.093	J	mg/Kg	1	6/23/2016 1:47:16 PM	25923
Surr: Dibromofluoromethane	103		70-130		%Rec	1	6/23/2016 1:47:16 PM	25923
Surr: 1,2-Dichloroethane-d4	105		70-130		%Rec	1	6/23/2016 1:47:16 PM	25923
Surr: Toluene-d8	93.7		70-130		%Rec	1	6/23/2016 1:47:16 PM	25923
Surr: 4-Bromofluorobenzene	100		70-130		%Rec	1	6/23/2016 1:47:16 PM	25923
EPA METHOD 418.1: TPH							Analyst: **TOM**	
Petroleum Hydrocarbons, TR	610	83	200		mg/Kg	10	6/23/2016	25996

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 2:00:00 PM
Lab ID: 1606995-007
Matrix: AQUEOUS
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **BCN**	
Benzene	ND	0.096	1.0		µg/L	1	6/28/2016 2:06:00 AM	A35246
Toluene	ND	0.12	1.0		µg/L	1	6/28/2016 2:06:00 AM	A35246
Ethylbenzene	ND	0.11	1.0		µg/L	1	6/28/2016 2:06:00 AM	A35246
Xylenes, Total	ND	0.37	1.5		µg/L	1	6/28/2016 2:06:00 AM	A35246
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	1	6/28/2016 2:06:00 AM	A35246
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	6/28/2016 2:06:00 AM	A35246
Surr: Dibromofluoromethane	95.3	0	70-130		%Rec	1	6/28/2016 2:06:00 AM	A35246
Surr: Toluene-d8	101	0	70-130		%Rec	1	6/28/2016 2:06:00 AM	A35246

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-6/16/2016
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 6/16/2016 2:15:00 PM
Lab ID: 1606995-008
Matrix: AQUEOUS
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **BCN**	
Benzene	ND	0.096	1.0		µg/L	1	6/28/2016 2:29:00 AM	A35246
Toluene	ND	0.12	1.0		µg/L	1	6/28/2016 2:29:00 AM	A35246
Ethylbenzene	ND	0.11	1.0		µg/L	1	6/28/2016 2:29:00 AM	A35246
Xylenes, Total	ND	0.37	1.5		µg/L	1	6/28/2016 2:29:00 AM	A35246
Surr: 1,2-Dichloroethane-d4	88.0	0	70-130		%Rec	1	6/28/2016 2:29:00 AM	A35246
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	6/28/2016 2:29:00 AM	A35246
Surr: Dibromofluoromethane	92.7	0	70-130		%Rec	1	6/28/2016 2:29:00 AM	A35246
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	6/28/2016 2:29:00 AM	A35246

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: OCD Central Landfarm Semiannual Sam
Collection Date:
Lab ID: 1606995-009
Matrix: AQUEOUS
Received Date: 6/17/2016 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **BCN**	
Benzene	ND	0.096	1.0		µg/L	1	6/28/2016 3:40:00 AM	A35246
Toluene	ND	0.12	1.0		µg/L	1	6/28/2016 3:40:00 AM	A35246
Ethylbenzene	ND	0.11	1.0		µg/L	1	6/28/2016 3:40:00 AM	A35246
Xylenes, Total	ND	0.37	1.5		µg/L	1	6/28/2016 3:40:00 AM	A35246
Surr: 1,2-Dichloroethane-d4	86.1	0	70-130		%Rec	1	6/28/2016 3:40:00 AM	A35246
Surr: 4-Bromofluorobenzene	99.5	0	70-130		%Rec	1	6/28/2016 3:40:00 AM	A35246
Surr: Dibromofluoromethane	91.7	0	70-130		%Rec	1	6/28/2016 3:40:00 AM	A35246
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	6/28/2016 3:40:00 AM	A35246

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

Qualifiers:

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

Anatek Labs, Inc.

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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 #: 160622057
Project Name: 1606995

Analytical Results Report

Sample Number 160622057-001 **Sampling Date** 6/16/2016 **Date/Time Received** 6/16/2016 10:45 AM
Client Sample ID 1606995-001B / CENTRALOCD-01-6/16/2016 **Sampling Time** 12:20 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.283	6/30/2016	MER	EPA 335.4	
%moisture	15.5	Percent		6/29/2016	ETL	%moisture	

Sample Number 160622057-002 **Sampling Date** 6/16/2016 **Date/Time Received** 6/16/2016 10:45 AM
Client Sample ID 1606995-002B / CENTRALOCD-02-6/16/2016 **Sampling Time** 12:50 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.297	6/30/2016	MER	EPA 335.4	
%moisture	17.2	Percent		6/29/2016	ETL	%moisture	

Sample Number 160622057-003 **Sampling Date** 6/16/2016 **Date/Time Received** 6/16/2016 10:45 AM
Client Sample ID 1606995-003B / CENTRALOCD-03-6/16/2016 **Sampling Time** 1:20 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.3	6/30/2016	MER	EPA 335.4	
%moisture	16.8	Percent		6/29/2016	ETL	%moisture	

Sample Number 160622057-004 **Sampling Date** 6/16/2016 **Date/Time Received** 6/16/2016 10:45 AM
Client Sample ID 1606995-004B / CENTRALOCD-04-6/16/2016 **Sampling Time** 11:45 AM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.295	6/30/2016	MER	EPA 335.4	
%moisture	17.4	Percent		6/29/2016	ETL	%moisture	

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

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	**Batch #:**	160622057
Address:	4901 HAWKINS NE SUITE D	**Project Name:**	1606995
	ALBUQUERQUE, NM 87109		
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	160622057-005	**Sampling Date**	6/16/2016	**Date/Time Received**	6/16/2016	10:45 AM
Client Sample ID	1606995-005B / BD-6/16/2016			**Sampling Time**		
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.29	6/30/2016	MER	EPA 335.4	
%moisture	17.6	Percent		6/29/2016	ETL	%moisture	

Sample Number	160622057-006	**Sampling Date**	6/16/2016	**Date/Time Received**	6/16/2016	10:45 AM
Client Sample ID	1606995-006B / CENTRALOCD-TZ-6/16/2016			**Sampling Time**	1:40 PM	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.487	mg/Kg	0.25	6/30/2016	MER	EPA 335.4	
%moisture	8.6	Percent		6/29/2016	ETL	%moisture	

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.

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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 #: 160622057
Project Name: 1606995

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.501	mg/kg	0.5	100.2	90-110	6/30/2016	6/30/2016

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
160622057-002	Cyanide	ND	14.6	mg/kg	15.1	96.7	70-130	6/30/2016	6/30/2016

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	14.7	mg/kg	14.9	98.7	0.7	0-25	6/30/2016	6/30/2016

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/Kg	0.5	6/30/2016	6/30/2016

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

Comments:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**
15-Jul-16

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-26092**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **26092**	RunNo: **35241**							
Prep Date: **6/27/2016**	Analysis Date: **6/27/2016**	SeqNo: **1089804**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	0.48	1.5								J

Sample ID **LCS-26092**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **26092**	RunNo: **35241**							
Prep Date: **6/27/2016**	Analysis Date: **6/27/2016**	SeqNo: **1089805**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	102	90	110			
Chloride	14	1.5	15.00	0	94.7	90	110			
Nitrogen, Nitrate (As N)	7.4	0.30	7.500	0	98.3	90	110			
Sulfate	29	1.5	30.00	0	97.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-25996**	SampType: **MBLK**	TestCode: **EPA Method 418.1: TPH**
Client ID: **PBS**	Batch ID: **25996**	RunNo: **35151**
Prep Date: **6/22/2016**	Analysis Date: **6/23/2016**	SeqNo: **1087694** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID **LCS-25996**	SampType: **LCS**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS**	Batch ID: **25996**	RunNo: **35151**
Prep Date: **6/22/2016**	Analysis Date: **6/23/2016**	SeqNo: **1087695** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	96	20	100.0	0	95.7	83.4	127			

Sample ID **1606995-002AMS**	SampType: **MS**	TestCode: **EPA Method 418.1: TPH**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **25996**	RunNo: **35151**
Prep Date: **6/22/2016**	Analysis Date: **6/23/2016**	SeqNo: **1087698** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	89	19	96.99	0	91.7	80	120			

Sample ID **1606995-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 418.1: TPH**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **25996**	RunNo: **35151**
Prep Date: **6/22/2016**	Analysis Date: **6/23/2016**	SeqNo: **1087699** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	93	20	100.3	0	93.0	80	120	4.79	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-25944**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **25944**	RunNo: **35116**
Prep Date: **6/20/2016**	Analysis Date: **6/23/2016**	SeqNo: **1086562** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		88.1	70	130			

Sample ID **LCS-25944**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **25944**	RunNo: **35116**
Prep Date: **6/20/2016**	Analysis Date: **6/23/2016**	SeqNo: **1086657** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	75.2	62.6	124			
Surr: DNOP	4.4		5.000		87.1	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**
15-Jul-16

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **1606995-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CentralOCD-TZ-6/16**	Batch ID: **25923**	RunNo: **35159**
Prep Date: **6/17/2016**	Analysis Date: **6/24/2016**	SeqNo: **1088051** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	23.02	0	93.3	59.3	143			
Surr: BFB	840		920.8		90.9	80	120			

Sample ID **1606995-006AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CentralOCD-TZ-6/16**	Batch ID: **25923**	RunNo: **35159**
Prep Date: **6/17/2016**	Analysis Date: **6/24/2016**	SeqNo: **1088052** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	24.90	0	107	59.3	143	21.1	20	R
Surr: BFB	950		996.0		95.2	80	120	0	0	

Sample ID **LCS-25923**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **25923**	RunNo: **35159**
Prep Date: **6/17/2016**	Analysis Date: **6/24/2016**	SeqNo: **1088059** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	80	120			
Surr: BFB	910		1000		90.9	80	120			

Sample ID **MB-25923**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **25923**	RunNo: **35159**
Prep Date: **6/17/2016**	Analysis Date: **6/24/2016**	SeqNo: **1088060** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		93.3	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-25923**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS**	Batch ID: **25923**	RunNo: **35020**
Prep Date: **6/17/2016**	Analysis Date: **6/20/2016**	SeqNo: **1083254** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	0.020	0.050								J
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	0.028	0.15								J
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	0.10	0.15								J
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-25923**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS**	Batch ID: **25923**	RunNo: **35020**
Prep Date: **6/17/2016**	Analysis Date: **6/20/2016**	SeqNo: **1083254** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.49		0.5000		97.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.9	70	130			
Surr: Toluene-d8	0.47		0.5000		94.5	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		101	70	130			

Sample ID **lcs-25923**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS**	Batch ID: **25923**	RunNo: **35020**
Prep Date: **6/17/2016**	Analysis Date: **6/20/2016**	SeqNo: **1083256** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	108	70	130			
Toluene	1.0	0.050	1.000	0	101	70	130			
Chlorobenzene	0.96	0.050	1.000	0	96.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **lcs-25923**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS**	Batch ID: **25923**	RunNo: **35020**
Prep Date: **6/17/2016**	Analysis Date: **6/20/2016**	SeqNo: **1083256** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.1	0.050	1.000	0	109	70	130			
Trichloroethene (TCE)	1.1	0.050	1.000	0	110	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.4	70	130			
Surr: Toluene-d8	0.49		0.5000		97.5	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			

Sample ID **1606995-002ams**	SampType: **MS**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **25923**	RunNo: **35020**
Prep Date: **6/17/2016**	Analysis Date: **6/20/2016**	SeqNo: **1083261** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.023	0.9302	0	90.1	49.2	155			
Toluene	0.75	0.047	0.9302	0	80.3	52	154			
Chlorobenzene	0.78	0.047	0.9302	0	84.0	53.2	150			
1,1-Dichloroethene	0.72	0.047	0.9302	0	77.5	34.2	163			
Trichloroethene (TCE)	0.84	0.047	0.9302	0	90.6	48.2	151			
Surr: Dibromofluoromethane	0.48		0.4651		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.46		0.4651		97.9	70	130			
Surr: Toluene-d8	0.44		0.4651		95.7	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.4651		99.8	70	130			

Sample ID **1606995-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **25923**	RunNo: **35020**
Prep Date: **6/17/2016**	Analysis Date: **6/20/2016**	SeqNo: **1083262** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.024	0.9506	0	101	49.2	155	13.6	20	
Toluene	0.86	0.048	0.9506	0	90.3	52	154	13.9	20	
Chlorobenzene	0.82	0.048	0.9506	0	86.2	53.2	150	4.81	20	
1,1-Dichloroethene	0.94	0.048	0.9506	0	98.7	34.2	163	26.2	20	R
Trichloroethene (TCE)	0.98	0.048	0.9506	0	103	48.2	151	15.1	20	
Surr: Dibromofluoromethane	0.50		0.4753		104	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.46		0.4753		97.1	70	130	0	0	
Surr: Toluene-d8	0.44		0.4753		93.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.48		0.4753		100	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **A35246**	RunNo: **35246**
Prep Date:	Analysis Date: **6/27/2016**	SeqNo: **1090124** 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								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **A35246**	RunNo: **35246**
Prep Date:	Analysis Date: **6/27/2016**	SeqNo: **1090133** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	83.2	70	130			
Toluene	19	1.0	20.00	0	95.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.8	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **1606995-008ams**	SampType: **MS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **FB-6/16/2016**	Batch ID: **A35246**	RunNo: **35246**
Prep Date:	Analysis Date: **6/28/2016**	SeqNo: **1090146** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	89.9	70	130			
Toluene	19	1.0	20.00	0	94.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.9	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **1606995-008amsd**	SampType: **MSD**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **FB-6/16/2016**	Batch ID: **A35246**	RunNo: **35246**
Prep Date:	Analysis Date: **6/28/2016**	SeqNo: **1090147** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	83.9	70	130	6.95	20	
Toluene	19	1.0	20.00	0	94.1	70	130	0.0106	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**1606995-008amsd**	SampType:	**MSD**	TestCode:	**EPA Method 8260: Volatiles Short List**
Client ID:	**FB-6/16/2016**	Batch ID:	**A35246**	RunNo:	**35246**
Prep Date:		Analysis Date:	**6/28/2016**	SeqNo:	**1090147** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130	0	0	
Surr: Dibromofluoromethane	8.9		10.00		88.7	70	130	0	0	
Surr: Toluene-d8	10		10.00		104	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-26116**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS**	Batch ID: **26116**	RunNo: **35339**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1093291** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Aniline	ND	0.20								
Anthracene	ND	0.20								
Azobenzene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Benzoic acid	0.088	0.50								J
Benzyl alcohol	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	0.11	0.50								J
4-Bromophenyl phenyl ether	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Carbazole	ND	0.20								
4-Chloro-3-methylphenol	ND	0.50								
4-Chloroaniline	ND	0.50								
2-Chloronaphthalene	ND	0.25								
2-Chlorophenol	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
Chrysene	ND	0.20								
Di-n-butyl phthalate	0.11	0.40								J
Di-n-octyl phthalate	ND	0.40								
Dibenz(a,h)anthracene	ND	0.20								
Dibenzofuran	ND	0.20								
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.25								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
2,4-Dichlorophenol	ND	0.40								
2,4-Dimethylphenol	ND	0.30								
4,6-Dinitro-2-methylphenol	0.086	0.40								J
2,4-Dinitrophenol	ND	0.50								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-26116**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS**	Batch ID: **26116**	RunNo: **35339**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1093291** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	0.50								
2,6-Dinitrotoluene	ND	0.50								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Hexachlorobenzene	ND	0.20								
Hexachlorobutadiene	ND	0.20								
Hexachlorocyclopentadiene	ND	0.20								
Hexachloroethane	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.40								
3+4-Methylphenol	ND	0.20								
N-Nitrosodi-n-propylamine	ND	0.20								
N-Nitrosodiphenylamine	ND	0.20								
Naphthalene	ND	0.20								
2-Nitroaniline	ND	0.20								
3-Nitroaniline	ND	0.20								
4-Nitroaniline	ND	0.40								
Nitrobenzene	ND	0.40								
2-Nitrophenol	ND	0.20								
4-Nitrophenol	ND	0.25								
Pentachlorophenol	ND	0.40								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	0.40								
1,2,4-Trichlorobenzene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
Surr: 2-Fluorophenol	2.8		3.330		83.4	28.3	102			
Surr: Phenol-d5	3.0		3.330		89.4	35.7	103			
Surr: 2,4,6-Tribromophenol	3.0		3.330		89.0	35.2	108			
Surr: Nitrobenzene-d5	1.4		1.670		83.8	24	118			
Surr: 2-Fluorobiphenyl	1.6		1.670		95.1	35.4	111			
Surr: 4-Terphenyl-d14	1.1		1.670		65.6	15	91.7			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**
15-Jul-16

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **lcs-26116**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS**	Batch ID: **26116**	RunNo: **35339**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1093292** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.5	0.20	1.670	0	87.1	45.8	99.8			
4-Chloro-3-methylphenol	2.9	0.50	3.330	0	88.2	51.5	103			
2-Chlorophenol	2.8	0.20	3.330	0	82.6	46.5	105			
1,4-Dichlorobenzene	1.3	0.20	1.670	0	79.5	45.5	103			
2,4-Dinitrotoluene	1.3	0.50	1.670	0	80.3	36	87.2			
N-Nitrosodi-n-propylamine	1.1	0.20	1.670	0	63.4	47.3	104			
4-Nitrophenol	2.8	0.25	3.330	0	84.6	47.3	95.3			
Pentachlorophenol	2.6	0.40	3.330	0	79.1	38.7	89.3			
Phenol	2.7	0.20	3.330	0	82.2	47.8	106			
Pyrene	1.4	0.20	1.670	0	83.1	33.4	105			
1,2,4-Trichlorobenzene	1.5	0.20	1.670	0	90.9	50.4	115			
Surr: 2-Fluorophenol	2.5		3.330		75.9	28.3	102			
Surr: Phenol-d5	2.7		3.330		79.7	35.7	103			
Surr: 2,4,6-Tribromophenol	3.0		3.330		89.0	35.2	108			
Surr: Nitrobenzene-d5	1.5		1.670		88.9	24	118			
Surr: 2-Fluorobiphenyl	1.5		1.670		87.5	35.4	111			
Surr: 4-Terphenyl-d14	1.3		1.670		75.7	15	91.7			

Sample ID **1606995-002ams**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **26116**	RunNo: **35369**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1094093** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.2	0.20	1.651	0	70.1	39.3	86.4			
4-Chloro-3-methylphenol	2.4	0.49	3.292	0	71.8	37.5	96.4			
2-Chlorophenol	2.4	0.20	3.292	0	71.6	37.4	90.6			
1,4-Dichlorobenzene	0.91	0.20	1.651	0	55.4	31.7	85			
2,4-Dinitrotoluene	0.98	0.49	1.651	0	59.3	26.4	86			
N-Nitrosodi-n-propylamine	1.0	0.20	1.651	0	61.2	43.5	83			
4-Nitrophenol	2.1	0.25	3.292	0	65.2	32.7	98			
Pentachlorophenol	1.9	0.40	3.292	0	57.5	26.6	87.4			
Phenol	2.3	0.20	3.292	0	69.9	40.5	85.3			
Pyrene	1.0	0.20	1.651	0	61.9	23.2	93.9			
1,2,4-Trichlorobenzene	1.2	0.20	1.651	0	70.6	38.7	99			
Surr: 2-Fluorophenol	2.1		3.292		63.6	28.3	102			
Surr: Phenol-d5	2.3		3.292		69.3	35.7	103			
Surr: 2,4,6-Tribromophenol	2.1		3.292		63.6	35.2	108			
Surr: Nitrobenzene-d5	1.2		1.651		71.4	24	118			
Surr: 2-Fluorobiphenyl	1.2		1.651		69.9	35.4	111			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **1606995-002ams**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **26116**	RunNo: **35369**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1094093** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	0.91		1.651		55.1	15	91.7			

Sample ID **1606995-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **26116**	RunNo: **35369**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1094094** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.1	0.20	1.653	0	64.2	39.3	86.4	8.70	30.2	
4-Chloro-3-methylphenol	2.2	0.49	3.296	0	65.3	37.5	96.4	9.36	37.2	
2-Chlorophenol	2.1	0.20	3.296	0	62.3	37.4	90.6	13.7	48	
1,4-Dichlorobenzene	0.80	0.20	1.653	0	48.1	31.7	85	13.9	40.6	
2,4-Dinitrotoluene	0.92	0.49	1.653	0	55.8	26.4	86	5.97	47.7	
N-Nitrosodi-n-propylamine	0.92	0.20	1.653	0	55.6	43.5	83	9.40	52.5	
4-Nitrophenol	2.1	0.25	3.296	0	62.7	32.7	98	3.78	36.6	
Pentachlorophenol	1.9	0.40	3.296	0	57.6	26.6	87.4	0.375	65.5	
Phenol	1.9	0.20	3.296	0	58.8	40.5	85.3	17.2	44	
Pyrene	0.94	0.20	1.653	0	56.9	23.2	93.9	8.27	42.1	
1,2,4-Trichlorobenzene	1.0	0.20	1.653	0	60.9	38.7	99	14.6	31.5	
Surr: 2-Fluorophenol	1.8		3.296		54.8	28.3	102	0	0	
Surr: Phenol-d5	2.0		3.296		61.9	35.7	103	0	0	
Surr: 2,4,6-Tribromophenol	2.1		3.296		64.3	35.2	108	0	0	
Surr: Nitrobenzene-d5	1.0		1.653		61.0	24	118	0	0	
Surr: 2-Fluorobiphenyl	1.1		1.653		66.3	35.4	111	0	0	
Surr: 4-Terphenyl-d14	0.87		1.653		52.6	15	91.7	0	0	

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**MB-26093**	SampType:	**MBLK**	TestCode:	**EPA Method 7471: Mercury**					
Client ID:	**PBS**	Batch ID:	**26093**	RunNo:	**35255**					
Prep Date:	**6/27/2016**	Analysis Date:	**6/28/2016**	SeqNo:	**1090434**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	**LCS-26093**	SampType:	**LCS**	TestCode:	**EPA Method 7471: Mercury**					
Client ID:	**LCSS**	Batch ID:	**26093**	RunNo:	**35255**					
Prep Date:	**6/27/2016**	Analysis Date:	**6/28/2016**	SeqNo:	**1090435**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	105	80	120			

Sample ID	**1606995-002AMS**	SampType:	**MS**	TestCode:	**EPA Method 7471: Mercury**					
Client ID:	**CentralOCD-02-6/16/**	Batch ID:	**26093**	RunNo:	**35255**					
Prep Date:	**6/27/2016**	Analysis Date:	**6/28/2016**	SeqNo:	**1090442**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.031	0.1548	0.003335	99.7	75	125			

Sample ID	**1606995-002AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 7471: Mercury**					
Client ID:	**CentralOCD-02-6/16/**	Batch ID:	**26093**	RunNo:	**35255**					
Prep Date:	**6/27/2016**	Analysis Date:	**6/28/2016**	SeqNo:	**1090443**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1683	0.003335	103	75	125	11.4	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-26123**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS**	Batch ID: **26123**	RunNo: **35332**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1093114** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	2.5								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Uranium	ND	5.0								
Zinc	ND	2.5								

Sample ID **LCS-26123**	SampType: **LCS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS**	Batch ID: **26123**	RunNo: **35332**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1093115** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	93.0	80	120			
Barium	24	0.10	25.00	0	94.8	80	120			
Cadmium	24	0.10	25.00	0	94.4	80	120			
Chromium	23	0.30	25.00	0	93.9	80	120			
Copper	25	0.30	25.00	0	98.1	80	120			
Iron	24	2.5	25.00	0	94.8	80	120			
Lead	22	0.25	25.00	0	88.1	80	120			
Manganese	23	0.10	25.00	0	92.3	80	120			
Selenium	23	2.5	25.00	0	92.1	80	120			
Silver	4.7	0.25	5.000	0	93.1	80	120			
Uranium	24	5.0	25.00	0	98.0	80	120			
Zinc	24	2.5	25.00	0	94.2	80	120			

Sample ID **1606995-002AMS**	SampType: **MS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **CentralOCD-02-6/16/**	Batch ID: **26123**	RunNo: **35362**
Prep Date: **6/28/2016**	Analysis Date: **6/30/2016**	SeqNo: **1093792** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	15	2.4	24.42	0.8789	57.7	75	125			S
Barium	160	0.098	24.42	165.2	-4.64	75	125			S
Cadmium	16	0.098	24.42	0	64.2	75	125			S
Chromium	24	0.29	24.42	8.131	66.6	75	125			S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606995**

15-Jul-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID **1606995-002AMS** SampType: **MS** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **CentralOCD-02-6/16/** Batch ID: **26123** RunNo: **35362**

Prep Date: **6/28/2016** Analysis Date: **6/30/2016** SeqNo: **1093792** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	19	0.29	24.42	2.413	67.0	75	125			S
Lead	17	0.24	24.42	3.606	52.9	75	125			S
Selenium	12	2.4	24.42	0	50.2	75	125			S
Silver	3.2	0.24	4.885	0	65.0	75	125			S
Uranium	14	4.9	24.42	0	58.6	75	125			S
Zinc	28	2.4	24.42	12.53	62.3	75	125			S

Sample ID **1606995-002AMSD** SampType: **MSD** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **CentralOCD-02-6/16/** Batch ID: **26123** RunNo: **35362**

Prep Date: **6/28/2016** Analysis Date: **6/30/2016** SeqNo: **1093793** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	17	2.5	25.41	0.8789	63.0	75	125	11.9	20	S
Barium	210	0.10	25.41	165.2	157	75	125	22.2	20	RS
Cadmium	17	0.10	25.41	0	65.5	75	125	6.02	20	S
Chromium	26	0.30	25.41	8.131	70.2	75	125	6.27	20	S
Copper	21	0.30	25.41	2.413	71.9	75	125	9.71	20	S
Lead	18	0.25	25.41	3.606	55.0	75	125	6.18	20	S
Selenium	11	2.5	25.41	0	44.7	75	125	7.71	20	S
Silver	3.4	0.25	5.082	0	67.5	75	125	7.68	20	S
Uranium	15	5.1	25.41	0	60.3	75	125	6.96	20	S
Zinc	30	2.5	25.41	12.53	69.5	75	125	8.40	20	S

Sample ID **1606995-002APS** SampType: **PS** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **CentralOCD-02-6/16/** Batch ID: **26123** RunNo: **35362**

Prep Date: Analysis Date: **6/30/2016** SeqNo: **1093794** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	21	2.4	24.44	0.8789	82.8	80	120			
Barium	200	0.098	24.44	165.2	133	80	120			S
Cadmium	20	0.098	24.44	0	81.9	80	120			
Chromium	28	0.29	24.44	8.131	81.1	80	120			
Copper	24	0.29	24.44	2.413	89.9	80	120			
Lead	22	0.24	24.44	3.606	74.9	80	120			S
Selenium	19	2.4	24.44	0	76.3	80	120			S
Silver	3.9	0.24	4.888	0	80.3	80	120			
Uranium	18	4.9	24.44	0	75.5	80	120			S
Zinc	32	2.4	24.44	12.53	79.8	80	120			S

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1606995** RcptNo: **1**

Received by/date: ~~AT~~ 06/17/16

Logged By: **Anne Thorne** 6/17/2016 10:00:00 AM Anne Thorne

Completed By: **Anne Thorne** 6/17/2016 Anne Thorne

Reviewed By: AJ 6/17/16

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
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	4.4	Good				

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Route 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _Please provide EDD_____

Turn-Around Time:
☒ Standard ☐ Rush_____

Project Name:
OCD Central Landfarm Semiannual Sampling

Project #:
697-052-004

Project Manager:
Ed Riege

Sampler: Joey Waldmann

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.4

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. 1606995	Vadose Zone List (see attached)	NMAC List (see attached)	TPH-DRO, GRO, and MRO by 8015M	BTEX (8260)	Air Bubbles (Y or N)
6/16/2016	1220	soil	CentralOCD-01-6/16/2016	8ox - 3, 4oz - 1	none	-001	X	X			
6/16/2016	1250	soil	CentralOCD-02-6/16/2016	8ox - 3, 4oz - 1	none	-002	X	X			
6/16/2016	1320	soil	CentralOCD-03-6/16/2016	8ox - 3, 4oz - 1	none	-003	X	X			
6/16/2016	1145	soil	CentralOCD-04-6/16/2016	8ox - 3, 4oz - 1	none	-004	X	X			
6/16/2016	———	soil	BD-6/16/2016	8ox - 3, 4oz - 1	none	-005	X	X			
6/16/2016	1250	soil	CentralOCD-02-6/16/2016-MS	8ox - 3, 4oz - 1	none	-002	X	X			
6/16/2016	1250	soil	CentralOCD-02-6/16/2016-MSD	8ox - 3, 4oz - 1	none	-002	X	X			
6/16/2016	1340	soil	CentralOCD-TZ-6/16/2016	8oz - 3, 4oz - 1	none	-006	X	X	X		
6/16/2016	1400	water	EB-6/16/2016	VOA - 3	HCL	-007				X	
6/16/2016	1415	water	FB-6/16/2016	VOA - 3	HCL	-008				X	
		water	Trip Blank	VOA - 3	HCL	-009				X	

Date:	Time:	Relinquished by:	Received by:	Date Time
6/17/2016	10:00	Joey Waldmann		
Date:	Time:	Relinquished by:	Received by:	Date Time 06/17/16 1000

Remarks: Please cc Grant Price (gprice@trihydro.com) with results. Call Grant @ 307-745-7474 w/ questions. **Verify that Reporting limits comply with those shown on the attached. PCBs need DL of 0.02 mg/kg. Data report and package w/ Trihydro EDD needed within 10 days of reciept. Any way to prevent low surrogate recoveries as w/ Sept. 2014 data package (Rpt 1409874)?**

VADOSE ZONE ANALYTES AND REPORTING LIMITS, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Chloride	E300	mg/kg	30
Benzene	SW8260B	mg/kg	0.050
Ethylbenzene	SW8260B	mg/kg	0.050
Toluene	SW8260B	mg/kg	0.050
Xylenes, Total	SW8260B	mg/kg	0.100
Petroleum Hydrocarbons, TR	E418.1	mg/kg	20

NMAC LIST ANALYTES AND REPORTING LIMITS, CONSTITUENTS LISTED IN SUBSECTIONS A AND B OF 20.6.2.3103 NMAC, CENTRAL OIL CONSERVATION DIVISION LANDFARM WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO

20.6.2.3103 NMAC (6/9/2016)

Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in

A. Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

-1	Arsenic (As)	0.1 mg/l
-2	Barium (Ba)	1.0 mg/l
-3	Cadmium (Cd)	0.01 mg/l
-4	Chromium (Cr)	0.05 mg/l
-5	Cyanide (CN)	0.2 mg/l
-6	Fluoride (F)	1.6 mg/l
-7	Lead (Pb)	0.05 mg/l
-8	Total Mercury (Hg)	0.002 mg/l
-9	Nitrate (NO_3 as N)	10.0 mg/l
-10	Selenium (Se)	0.05 mg/l
-11	Silver (Ag)	0.05 mg/l
-12	Uranium (U)	0.03 mg/l
-13	Radioactivity: Combined Radium-226 & Radium-228	30 pCi/l
-14	Benzene	0.01 mg/l
~~**-15**~~	~~Polychlorinated biphenyls (PCB's)~~	~~0.001 mg/l~~
-16	Toluene	0.75 mg/l
-17	Carbon Tetrachloride	0.01 mg/l
-18	1,2-dichloroethane (EDC)	0.01 mg/l
-19	1,1-dichloroethylene (1,1-DCE)	0.005 mg/l
-20	1,1,2,2-tetrachloroethylene (PCE)	0.02 mg/l
-21	1,1,2-trichloroethylene (TCE)	0.1 mg/l
-22	ethylbenzene	0.75 mg/l
-23	total xylenes	0.62 mg/l
-24	methylene chloride	0.1 mg/l
-25	chloroform	0.1 mg/l
-26	1,1-dichloroethane	0.025 mg/l
-27	ethylene dibromide (EDB)	0.0001 mg/l
-28	1,1,1-trichloroethane	0.06 mg/l
-29	1,1,2-trichloroethane	0.01 mg/l
-30	1,1,2,2-tetrachloroethane	0.01 mg/l
-31	vinyl chloride	0.001 mg/l
-32	PAHs: total naphthalene plus monomethylnaphthalenes	0.03 mg/l
-33	benzo-a-pyrene	0.0007 mg/l

B. Other Standards for Domestic Water Supply

-1	Chloride (Cl)	250.0 mg/l
-2	Copper (Cu)	1.0 mg/l
-3	Iron (Fe)	1.0 mg/l
-4	Manganese (Mn)	0.2 mg/l
-6	Phenols	0.005 mg/l
-7	Sulfate (SO_4)	600.0 mg/l
-8	Total Dissolved Solids (TDS)	1000.0 mg/l
-9	Zinc (Zn)	10.0 mg/l
-10	pH	between 6 and 9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
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Website: www.hallenvironmental.com

September 22, 2016

Ed Riege

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

RE: OCD Central Landfarm Semiannual Sampling OrderNo.: 1609455

Dear Ed Riege:

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

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1609455**
Date Reported: **9/22/2016**

CLIENT: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling
Lab Order: 1609455

Lab ID: 1609455-001 **Collection Date:** 9/6/2016 4:13:00 PM
Client Sample ID: CentralOCD-1021-09062016-F **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	270	12	30		mg/Kg	20	9/19/2016 9:00:29 PM	27590

Lab ID: 1609455-002 **Collection Date:** 9/6/2016 4:07:00 PM
Client Sample ID: CentralOCD-1021-09062016-SW-N **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	160	12	30		mg/Kg	20	9/19/2016 9:12:53 PM	27590

Lab ID: 1609455-003 **Collection Date:** 9/6/2016 4:20:00 PM
Client Sample ID: CentralOCD-1021-09062016-SW-S **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	280	12	30		mg/Kg	20	9/19/2016 9:25:18 PM	27590

Lab ID: 1609455-004 **Collection Date:** 9/6/2016 3:55:00 PM
Client Sample ID: CentralOCD-1021-09062016-SW-E **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	130	12	30		mg/Kg	20	9/20/2016 12:53:42 PM	27599

Lab ID: 1609455-005 **Collection Date:** 9/6/2016 4:25:00 PM
Client Sample ID: CentralOCD-1021-09062016-SW-W **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	490	12	30		mg/Kg	20	9/20/2016 1:06:07 PM	27599

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling
Lab Order: 1609455

Lab ID: 1609455-006 **Collection Date:** 9/6/2016 1:30:00 PM
Client Sample ID: CentralOCD-2271-09062016-F **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	170	12	30		mg/Kg	20	9/20/2016 1:18:31 PM	27599

Lab ID: 1609455-007 **Collection Date:** 9/6/2016 1:20:00 PM
Client Sample ID: CentralOCD-2271-09062016-SW-N **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	2200	31	75		mg/Kg	50	9/22/2016 5:18:25 AM	27599

Lab ID: 1609455-008 **Collection Date:** 9/6/2016 1:37:00 PM
Client Sample ID: CentralOCD-2271-09062016-SW-S **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	160	12	30		mg/Kg	20	9/20/2016 1:43:20 PM	27599

Lab ID: 1609455-009 **Collection Date:** 9/6/2016 1:05:00 PM
Client Sample ID: CentralOCD-2271-09062016-SW-E **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	1500	30	75		mg/Kg	50	9/22/2016 5:30:50 AM	27599

Lab ID: 1609455-010 **Collection Date:** 9/6/2016 1:45:00 PM
Client Sample ID: CentralOCD-2271-09062016-SW-W **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	300	12	30		mg/Kg	20	9/20/2016 2:45:23 PM	27599

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling
Lab Order: 1609455

Lab ID: 1609455-011 **Collection Date:** 9/6/2016
Client Sample ID: CentralOCD-BD-09062016 **Matrix:**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**	
Chloride	110	12	30		mg/Kg	20	9/20/2016 3:22:36 PM	27599

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1609455**

22-Sep-16

Client: Western Refining Southwest, Gallup

Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**MB-27590**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**27590**	RunNo:	**37316**					
Prep Date:	**9/19/2016**	Analysis Date:	**9/19/2016**	SeqNo:	**1158856**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-27590**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**27590**	RunNo:	**37316**					
Prep Date:	**9/19/2016**	Analysis Date:	**9/19/2016**	SeqNo:	**1158857**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID	**MB-27599**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**27599**	RunNo:	**37349**					
Prep Date:	**9/20/2016**	Analysis Date:	**9/20/2016**	SeqNo:	**1160293**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-27599**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**27599**	RunNo:	**37349**					
Prep Date:	**9/20/2016**	Analysis Date:	**9/20/2016**	SeqNo:	**1160294**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1609455** RcptNo: **1**

Received by/date: AG 09/08/16

Logged By: **Ashley Gallegos** **9/8/2016 5:10:00 PM** AG

Completed By: **Ashley Gallegos** **9/9/2016 12:34:02 PM** AG

Reviewed By: JC 09/12/16

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

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

Client: Wes[illegible]efining

Mailing Address: Route 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _Please provide EDD_____

Turn-Around Time:
☒ Standard ☐ Rush_____

Project Name:
OCD Central Landfarm Semiannual Sampling

Project #:
697-052-004

Project Manager:
Ed Riege

Sampler: Zac Bitsuie
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENT 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 1609455	Chloride by EPA 300.0	Air Bubbles (Y or N)
9/6/2016	1613	soil	CentralOCD-1021-09062016-F	two 4-oz	none	-001	X	
9/6/2016	1607	soil	CentralOCD-1021-09062016-SW-N	two 4-oz	none	-002	X	
9/6/2016	1620	soil	CentralOCD-1021-09062016-SW-S	two 4-oz	none	-003	X	
9/6/2016	1555	soil	CentralOCD-1021-09062016-SW-E	two 4-oz	none	-004	X	
9/6/2016	1625	soil	CentralOCD-1021-09062016-SW-W	two 4-oz	none	-005	X	
9/6/2016	1330	soil	CentralOCD-2271-09062016-F	two 4-oz	none	-006	X	
9/6/2016	1320	soil	CentralOCD-2271-09062016-SW-N	two 4-oz	none	-007	X	
9/6/2016	1337	soil	CentralOCD-2271-09062016-SW-S	two 4-oz	none	-008	X	
9/6/2016	1305	soil	CentralOCD-2271-09062016-SW-E	two 4-oz	none	-009	X	
9/6/2016	1345	soil	CentralOCD-2271-09062016-SW-W	two 4-oz	none	-010	X	
9/6/2016	1310	soil	CentralOCD-2271-09062016-SWE-MS	two 4-oz	none	-010009	X	
9/6/2016	1315	soil	CentralOCD-2271-09062016-SWE-MSD	two 4-oz	none	-010009	X	
9/6/2016	NA	soil	CentralOCD-BD-09062016	two 4-oz	none	-011	X	
9/6/2016	1635	water	EB-09062016	VOA - 3	HCL	-012	X	
9/6/2016	1640	water	FB-09062016	VOA - 3	HCL	-013	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
9-6-16	1830	[signature]	[signature]	9/8/16	1500
9/8/16	1710	[signature]	[signature]	09/08/16	1710

Remarks: Please cc Grant Price (gprice@trihydro.com) with results. Call Grant @ 307-745-7474 w/ questions. **Data report and package w/ Trihydro EDD needed within 10 days of reciept.**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 04, 2016

Cheryl Johnson

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

RE: Quarterly GW Sampling OrderNo.: 1603150

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/2/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP1-NW
Project: Quarterly GW Sampling
Collection Date: 3/2/2016 9:20:00 AM
Lab ID: 1603150-001
Matrix: AQUEOUS
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	3/7/2016 12:11:14 PM	24101
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2016 12:11:14 PM	24101
Surr: DNOP	105	0	70-141		%Rec	1	3/7/2016 12:11:14 PM	24101
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	3/4/2016 12:47:58 PM	A32596
Surr: BFB	90.6	0	49.5-130		%Rec	1	3/4/2016 12:47:58 PM	A32596
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.14	0.0013	0.0020		mg/L	1	3/11/2016 5:21:24 PM	C32754
Cadmium	ND	0.00075	0.0020		mg/L	1	3/11/2016 5:21:24 PM	C32754
Chromium	ND	0.0018	0.0060		mg/L	1	3/11/2016 5:21:24 PM	C32754
Copper	ND	0.0040	0.0060		mg/L	1	3/16/2016 3:22:36 PM	C32831
Iron	0.13	0.0091	0.020		mg/L	1	3/16/2016 3:22:36 PM	C32831
Manganese	0.0038	0.00032	0.0020		mg/L	1	3/11/2016 5:21:24 PM	C32754
Silver	ND	0.0028	0.0050		mg/L	1	3/11/2016 5:21:24 PM	C32754
Zinc	0.020	0.0028	0.010		mg/L	1	3/16/2016 3:22:36 PM	C32831
EPA METHOD 200.7: TOTAL METALS							Analyst: **MED**	
Barium	0.19	0.0011	0.0020		mg/L	1	3/15/2016 11:50:53 AM	24075
Cadmium	ND	0.00062	0.0020		mg/L	1	3/15/2016 11:50:53 AM	24075
Chromium	0.0028	0.0022	0.0060	J	mg/L	1	3/15/2016 11:50:53 AM	24075
Copper	ND	0.0051	0.0060		mg/L	1	3/15/2016 11:50:53 AM	24075
Iron	3.6	0.036	0.10	*	mg/L	5	3/15/2016 11:52:41 AM	24075
Manganese	0.11	0.0015	0.0020	*	mg/L	1	3/15/2016 11:50:53 AM	24075
Silver	ND	0.0021	0.0050		mg/L	1	3/15/2016 11:50:53 AM	24075
Zinc	0.087	0.0039	0.010		mg/L	1	3/15/2016 11:50:53 AM	24075
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0050	0.00032	0.0050	J	mg/L	5	3/25/2016 5:38:04 PM	B33098
Lead	0.00030	0.00013	0.0025	J	mg/L	5	3/25/2016 5:38:04 PM	B33098
Selenium	0.015	0.0039	0.020	J	mg/L	20	3/25/2016 5:41:07 PM	B33098
Uranium	0.023	0.000024	0.0025		mg/L	5	3/28/2016 6:50:06 PM	B33120
200.8 ICPMS METALS:TOTAL							Analyst: **JLF**	
Arsenic	ND	0.0058	0.020		mg/L	20	3/14/2016 6:36:04 PM	24075
Lead	0.0044	0.00024	0.0025		mg/L	5	3/14/2016 6:26:59 PM	24075
Selenium	0.011	0.0025	0.020	J	mg/L	20	3/14/2016 6:36:04 PM	24075
Uranium	0.025	0.000025	0.0025		mg/L	5	3/14/2016 6:26:59 PM	24075
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000053	0.00020		mg/L	1	3/4/2016 7:55:27 AM	24081

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP1-NW
Project: Quarterly GW Sampling
Collection Date: 3/2/2016 9:20:00 AM
Lab ID: 1603150-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.096	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Toluene	ND	0.089	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Ethylbenzene	ND	0.11	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Methyl tert-butyl ether (MTBE)	0.47	0.21	1.0	J	µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2,4-Trimethylbenzene	ND	0.10	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2-Dichloroethane (EDC)	ND	0.053	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Naphthalene	ND	0.083	2.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Acetone	3.8	0.88	10	J	µg/L	1	3/7/2016 5:51:16 PM	R32614
Bromobenzene	ND	0.080	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Bromoform	ND	0.10	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Bromomethane	ND	0.78	3.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
2-Butanone	ND	0.32	10		µg/L	1	3/7/2016 5:51:16 PM	R32614
Carbon disulfide	ND	0.60	10		µg/L	1	3/7/2016 5:51:16 PM	R32614
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Chloroethane	ND	0.15	2.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Chloroform	ND	0.089	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Chloromethane	ND	0.21	3.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Dibromomethane	ND	0.12	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,1-Dichloroethene	ND	0.076	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/7/2016 5:51:16 PM	R32614

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

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP1-NW
Project: Quarterly GW Sampling
Collection Date: 3/2/2016 9:20:00 AM
Lab ID: 1603150-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
2-Hexanone	ND	0.36	10		µg/L	1	3/7/2016 5:51:16 PM	R32614
Isopropylbenzene	ND	0.098	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
4-Methyl-2-pentanone	ND	0.15	10		µg/L	1	3/7/2016 5:51:16 PM	R32614
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
n-Butylbenzene	ND	0.16	3.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
n-Propylbenzene	ND	0.13	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Styrene	ND	0.095	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
tert-Butylbenzene	ND	0.096	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/7/2016 5:51:16 PM	R32614
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/7/2016 5:51:16 PM	R32614
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	3/7/2016 5:51:16 PM	R32614
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	3/7/2016 5:51:16 PM	R32614
Surr: Dibromofluoromethane	115	0	70-130		%Rec	1	3/7/2016 5:51:16 PM	R32614
Surr: Toluene-d8	108	0	70-130		%Rec	1	3/7/2016 5:51:16 PM	R32614

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Quarterly GW Sampling
Collection Date:
Lab ID: 1603150-002
Matrix: TRIP BLANK
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.096	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Toluene	ND	0.089	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Ethylbenzene	ND	0.11	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2,4-Trimethylbenzene	ND	0.10	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2-Dichloroethane (EDC)	ND	0.053	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Naphthalene	ND	0.083	2.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Acetone	ND	0.88	10		µg/L	1	3/7/2016 8:15:23 PM	R32614
Bromobenzene	ND	0.080	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Bromoform	ND	0.10	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Bromomethane	ND	0.78	3.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
2-Butanone	ND	0.32	10		µg/L	1	3/7/2016 8:15:23 PM	R32614
Carbon disulfide	ND	0.60	10		µg/L	1	3/7/2016 8:15:23 PM	R32614
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Chloroethane	ND	0.15	2.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Chloroform	ND	0.089	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Chloromethane	ND	0.21	3.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Dibromomethane	ND	0.12	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,1-Dichloroethene	ND	0.076	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/7/2016 8:15:23 PM	R32614

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Quarterly GW Sampling
Collection Date:
Lab ID: 1603150-002
Matrix: TRIP BLANK
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
2-Hexanone	ND	0.36	10		µg/L	1	3/7/2016 8:15:23 PM	R32614
Isopropylbenzene	ND	0.098	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
4-Methyl-2-pentanone	ND	0.15	10		µg/L	1	3/7/2016 8:15:23 PM	R32614
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
n-Butylbenzene	ND	0.16	3.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
n-Propylbenzene	ND	0.13	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Styrene	ND	0.095	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
tert-Butylbenzene	ND	0.096	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/7/2016 8:15:23 PM	R32614
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/7/2016 8:15:23 PM	R32614
Surr: 1,2-Dichloroethane-d4	89.9	0	70-130		%Rec	1	3/7/2016 8:15:23 PM	R32614
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	3/7/2016 8:15:23 PM	R32614
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	3/7/2016 8:15:23 PM	R32614
Surr: Toluene-d8	104	0	70-130		%Rec	1	3/7/2016 8:15:23 PM	R32614

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002498**	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								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002499**	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	99.2	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002500**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.0	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Chromium	0.0058	0.0060	0.006000	0	97.3	50	150			J
Manganese	0.0018	0.0020	0.002000	0	92.5	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.8	50	150			J

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C32831**	RunNo:	**32831**					
Prep Date:		Analysis Date:	**3/16/2016**	SeqNo:	**1006189**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Iron	ND	0.020								
Zinc	ND	0.010								

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C32831**	RunNo:	**32831**					
Prep Date:		Analysis Date:	**3/16/2016**	SeqNo:	**1006190**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper		0.48	0.0060	0.5000	0	96.9	85	115			
Iron		0.50	0.020	0.5000	0	101	85	115			
Zinc		0.50	0.010	0.5000	0	99.8	85	115			

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C32831**	RunNo:	**32831**					
Prep Date:		Analysis Date:	**3/16/2016**	SeqNo:	**1006191**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper		0.0042	0.0060	0.006000	0	69.8	50	150			J
Iron		0.019	0.020	0.02000	0	96.2	50	150			J
Zinc		0.0057	0.010	0.005000	0	115	50	150			J

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **MB-24075**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **24075**	RunNo: **32607**
Prep Date: **3/3/2016**	Analysis Date: **3/7/2016**	SeqNo: **997674** 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-24075**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **24075**	RunNo: **32607**
Prep Date: **3/3/2016**	Analysis Date: **3/7/2016**	SeqNo: **997675** 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	99.0	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	96.6	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **LLLCS-24075**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **24075**	RunNo: **32607**
Prep Date: **3/3/2016**	Analysis Date: **3/7/2016**	SeqNo: **997676** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	84.0	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0059	0.0060	0.006000	0	98.0	50	150			J
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0022	0.0020	0.002000	0	111	50	150			
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Zinc	0.0057	0.010	0.005000	0	115	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**LCS**	SampType: **LCS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B33098**			RunNo: **33098**					
Prep Date:		Analysis Date: **3/25/2016**			SeqNo: **1015701**		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	0.012	0.00050	0.01250	0	93.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.7	85	115			

Sample ID	**LLLCS**	SampType: **LCSLL**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B33098**			RunNo: **33098**					
Prep Date:		Analysis Date: **3/25/2016**			SeqNo: **1015702**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.2	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.5	50	150			J

Sample ID	**MB**	SampType: **MBLK**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **B33098**			RunNo: **33098**					
Prep Date:		Analysis Date: **3/25/2016**			SeqNo: **1015703**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**LCS**	SampType: **LCS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B33120**			RunNo: **33120**					
Prep Date:		Analysis Date: **3/28/2016**			SeqNo: **1016767**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	95.6	85	115			

Sample ID	**LLLCS**	SampType: **LCSLL**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B33120**			RunNo: **33120**					
Prep Date:		Analysis Date: **3/28/2016**			SeqNo: **1016769**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00049	0.00050	0.0005000	0	98.4	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B33120**	RunNo: **33120**
Prep Date:	Analysis Date: **3/28/2016**	SeqNo: **1016771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.000011	0.00050								J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID	**MB-24075**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**24075**	RunNo:	**32687**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000380**	Units:	**mg/L**			

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

Sample ID	**MSLCS-24075**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**24075**	RunNo:	**32687**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000383**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.025	0.0010	0.02500	0	98.0	85	115			
Uranium	0.012	0.00050	0.01250	0	98.8	85	115			

Sample ID	**MSLLLCS-24075**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**24075**	RunNo:	**32687**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000386**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00087	0.0010	0.001000	0	86.9	50	150			J
Lead	0.00046	0.00050	0.0005000	0	91.5	50	150			J
Selenium	0.00081	0.0010	0.001000	0	81.0	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	87.4	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID	**MB-24081**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**24081**	RunNo:	**32562**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/4/2016**	SeqNo:	**996234**	Units:	**mg/L**			

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

Sample ID	**LCS-24081**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**24081**	RunNo:	**32562**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/4/2016**	SeqNo:	**996235**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **LCS-24101**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **24101**	RunNo: **32603**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997914** 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	118	71.3	139			
Surr: DNOP	0.50		0.5000		99.7	70	141			

Sample ID **MB-24101**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **24101**	RunNo: **32603**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997915** 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	0.91		1.000		90.8	70	141			

Sample ID **1603150-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1-NW**	Batch ID: **24101**	RunNo: **32603**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997917** 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	59.4	160			
Surr: DNOP	0.47		0.5000		93.5	70	141			

Sample ID **1603150-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **STP1-NW**	Batch ID: **24101**	RunNo: **32603**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997918** 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	113	59.4	160	0.940	20	
Surr: DNOP	0.45		0.5000		89.6	70	141	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997207** 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		95.0	49.5	130			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	103	80	120			
Surr: BFB	21		20.00		106	49.5	130			

Sample ID **1603150-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **STP1-NW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997210** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	101	70	130			
Surr: BFB	21		20.00		107	49.5	130			

Sample ID **1603150-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **STP1-NW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	99.9	70	130	1.55	20	
Surr: BFB	21		20.00		106	49.5	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32614**	RunNo: **32614**
Prep Date:	Analysis Date: **3/7/2016**	SeqNo: **997827** 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)	0.15	1.0								J
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.32	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	0.16	1.0								J
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32614**	RunNo: **32614**
Prep Date:	Analysis Date: **3/7/2016**	SeqNo: **997827** 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	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.9	70	130			
Surr: Dibromofluoromethane	11		10.00		115	70	130			
Surr: Toluene-d8	9.5		10.00		94.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R32614**	RunNo: **32614**
Prep Date:	Analysis Date: **3/7/2016**	SeqNo: **997830** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	99.2	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603150**

04-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R32614**	RunNo: **32614**
Prep Date:	Analysis Date: **3/7/2016**	SeqNo: **997830** 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	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID **1603150-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **STP1-NW**	Batch ID: **R32614**	RunNo: **32614**
Prep Date:	Analysis Date: **3/7/2016**	SeqNo: **998313** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	120	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID **1603150-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **STP1-NW**	Batch ID: **R32614**	RunNo: **32614**
Prep Date:	Analysis Date: **3/7/2016**	SeqNo: **998314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130	4.99	20	
Toluene	20	1.0	20.00	0	100	70	130	2.99	20	
Chlorobenzene	21	1.0	20.00	0	105	70	130	5.81	20	
1,1-Dichloroethene	23	1.0	20.00	0	116	70	130	1.56	20	
Trichloroethene (TCE)	20	1.0	20.00	0	99.8	70	130	7.36	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130	0	0	
Surr: Dibromofluoromethane	12		10.00		116	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.0	70	130	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1603150 RcptNo: 1

Received by/date: 03/02/16

Logged By: Ashley Gallegos 3/2/2016 4:16:00 PM

Completed By: Ashley Gallegos 3/3/2016 9:04:59 AM

Reviewed By: 03/03/16

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° 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
(<2 or >12 unless noted)
Adjusted? No
Checked by: AG 3/3/16

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: WESTERN REFINING SW, INC.

GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING ROAD

GALLUP, NM 87301

Phone #: 505-722-0231

Email or Fax#: CHERYL.JOHNSON@WNR.COM

QA/QC Package: Standard / X Level 4 (Full Validation)

Accreditation: NELAP / ☐ Other

EDD (Type): EXCEL

Turn-Around Time: X Standard ☐ Rush

Project Name: QUARTERLY GW SAMPLING

Project #:

Project Manager: CHERYL JOHNSON

Sampler: TRACY PAYNE

On Ice: X Yes ☐ No

Sample Temperature: 1.0

HEAL No. 1603150

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC Metals (Total & Dissolved)			Air Bubbles (Y or N)
3/1/16	0920	WATER	STP1-NW	40 mL VOA-6	HCL	-001			✓							X					
				250 mL AMBER-1	NEAT				✓												
				125 mL PLASTIC-1	H_2SO_4													✓			
				125 mL PLASTIC-1	HNO_3													✓			
				500 mL PLASTIC-1	HNO_3													✓			
				500 mL PLASTIC-1	NEAT													✓			
			Trip Blank																		
			03/03/16																		

Date: 3/4/16 Time: 1300 Relinquished by:

Received by: Date: 3/4/16 Time: 1315

Date: 3/4/16 Time: 1616 Relinquished by:

Received by: Date: 03/09/16 Time: 1610

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

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

April 14, 2016

Cheryl Johnson

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

RE: Quarterly GW Sampling OrderNo.: 1603154

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/2/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 01, 2016.

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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 2:25:00 PM
Lab ID: 1603154-001
Matrix: AQUEOUS
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **KJH**	
Diesel Range Organics (DRO)	6.1	0.69	1.0		mg/L	1	3/7/2016 3:27:14 PM	24101
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2016 3:27:14 PM	24101
Surr: DNOP	96.9	0	70-141		%Rec	1	3/7/2016 3:27:14 PM	24101
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.86	0.025	0.050		mg/L	1	3/4/2016 4:53:21 PM	A32596
Surr: BFB	200	0	49.5-130	S	%Rec	1	3/4/2016 4:53:21 PM	A32596
EPA METHOD 300.0: ANIONS							Analyst: **JRR**	
Fluoride	2.0	0.23	1.0		mg/L	10	3/4/2016 5:44:47 PM	R32618
Chloride	1700	5.5	100		mg/L	200	3/14/2016 8:29:07 PM	A32799
Bromide	9.1	0.32	1.0		mg/L	10	3/4/2016 5:44:47 PM	R32618
Phosphorus, Orthophosphate (As P)	ND	2.2	5.0	H	mg/L	10	3/4/2016 5:44:47 PM	R32618
Sulfate	23	0.64	5.0		mg/L	10	3/4/2016 5:44:47 PM	R32618
Nitrate+Nitrite as N	ND	0.84	2.0		mg/L	10	3/29/2016 10:44:28 AM	R33179
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	0.62	0.0013	0.0020		mg/L	1	3/16/2016 3:38:53 PM	C32831
Cadmium	ND	0.00075	0.0020		mg/L	1	3/16/2016 3:38:53 PM	C32831
Calcium	150	1.3	5.0		mg/L	5	3/18/2016 1:17:07 PM	B32891
Chromium	ND	0.0018	0.0060		mg/L	1	3/16/2016 3:38:53 PM	C32831
Copper	ND	0.0040	0.0060		mg/L	1	3/16/2016 3:38:53 PM	C32831
Iron	4.6	0.045	0.10	*	mg/L	5	3/18/2016 1:17:07 PM	B32891
Magnesium	30	0.013	1.0		mg/L	1	3/16/2016 3:38:53 PM	C32831
Manganese	1.6	0.0016	0.010	*	mg/L	5	3/18/2016 1:17:07 PM	B32891
Potassium	3.9	0.18	1.0		mg/L	1	3/16/2016 3:38:53 PM	C32831
Silver	ND	0.0028	0.0050		mg/L	1	3/18/2016 1:15:18 PM	B32891
Sodium	1400	1.9	20		mg/L	20	3/18/2016 1:19:11 PM	B32891
Zinc	0.024	0.0028	0.010		mg/L	1	3/16/2016 3:38:53 PM	C32831
EPA METHOD 200.7: TOTAL METALS							Analyst: **MED**	
Barium	0.72	0.0011	0.0020		mg/L	1	3/15/2016 11:41:19 AM	24115
Cadmium	ND	0.00062	0.0020		mg/L	1	3/15/2016 11:41:19 AM	24115
Chromium	ND	0.0022	0.0060		mg/L	1	3/15/2016 11:41:19 AM	24115
Copper	ND	0.0051	0.0060		mg/L	1	3/15/2016 11:41:19 AM	24115
Iron	5.7	0.072	0.20	*	mg/L	10	3/16/2016 4:35:09 PM	24115
Manganese	1.7	0.015	0.020	*	mg/L	10	3/16/2016 4:35:09 PM	24115
Silver	ND	0.0021	0.0050		mg/L	1	3/25/2016 8:06:58 AM	24413
Zinc	0.016	0.0039	0.010		mg/L	1	3/15/2016 11:41:19 AM	24115
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.010	0.00032	0.0050	*	mg/L	5	3/25/2016 5:44:10 PM	B33098

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 2:25:00 PM
Lab ID: 1603154-001
Matrix: AQUEOUS
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Lead	0.00092	0.00013	0.0025	J	mg/L	5	3/25/2016 5:44:10 PM	B33098
Selenium	0.014	0.0039	0.020	J	mg/L	20	3/25/2016 5:47:14 PM	B33098
Uranium	0.015	0.000024	0.0025		mg/L	5	3/28/2016 6:53:09 PM	B33120
200.8 ICPMS METALS:TOTAL							Analyst: **JLF**	
Arsenic	0.0097	0.0015	0.0050		mg/L	5	3/14/2016 6:39:05 PM	24115
Lead	0.0034	0.00024	0.0025		mg/L	5	3/14/2016 6:39:05 PM	24115
Selenium	0.011	0.0012	0.010		mg/L	10	3/14/2016 6:42:05 PM	24115
Uranium	0.016	0.000025	0.0025		mg/L	5	3/14/2016 6:39:05 PM	24115
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000053	0.00020		mg/L	1	3/8/2016 11:17:53 AM	24112
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	8.0	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Acenaphthylene	ND	7.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Aniline	ND	9.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Anthracene	ND	6.6	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Azobenzene	ND	9.3	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Benz(a)anthracene	ND	6.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Benzo(a)pyrene	ND	6.3	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Benzo(b)fluoranthene	ND	6.6	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Benzo(g,h,i)perylene	ND	6.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Benzo(k)fluoranthene	ND	7.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Benzoic acid	ND	9.8	20		µg/L	1	3/13/2016 8:49:35 PM	24121
Benzyl alcohol	ND	8.0	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Bis(2-chloroethoxy)methane	ND	7.3	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Bis(2-chloroethyl)ether	ND	8.3	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Bis(2-chloroisopropyl)ether	ND	9.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Bis(2-ethylhexyl)phthalate	ND	7.5	10		µg/L	1	3/13/2016 8:49:35 PM	24121
4-Bromophenyl phenyl ether	ND	8.6	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Butyl benzyl phthalate	ND	7.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Carbazole	ND	7.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
4-Chloro-3-methylphenol	ND	8.0	10		µg/L	1	3/13/2016 8:49:35 PM	24121
4-Chloroaniline	ND	7.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2-Chloronaphthalene	ND	7.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2-Chlorophenol	ND	8.7	10		µg/L	1	3/13/2016 8:49:35 PM	24121
4-Chlorophenyl phenyl ether	ND	8.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Chrysene	ND	6.6	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Di-n-butyl phthalate	ND	8.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	3/13/2016 8:49:35 PM	24121

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 2:25:00 PM
Lab ID: 1603154-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	6.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Dibenzofuran	ND	8.6	10		µg/L	1	3/13/2016 8:49:35 PM	24121
1,2-Dichlorobenzene	ND	6.4	10		µg/L	1	3/13/2016 8:49:35 PM	24121
1,3-Dichlorobenzene	ND	6.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
1,4-Dichlorobenzene	ND	6.3	10		µg/L	1	3/13/2016 8:49:35 PM	24121
3,3´-Dichlorobenzidine	ND	4.7	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Diethyl phthalate	ND	8.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Dimethyl phthalate	ND	7.5	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2,4-Dichlorophenol	ND	7.6	20		µg/L	1	3/13/2016 8:49:35 PM	24121
2,4-Dimethylphenol	7.0	4.7	10	J	µg/L	1	3/13/2016 8:49:35 PM	24121
4,6-Dinitro-2-methylphenol	ND	7.3	20		µg/L	1	3/13/2016 8:49:35 PM	24121
2,4-Dinitrophenol	ND	9.9	20		µg/L	1	3/13/2016 8:49:35 PM	24121
2,4-Dinitrotoluene	ND	8.5	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2,6-Dinitrotoluene	ND	7.5	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Fluoranthene	ND	6.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Fluorene	ND	7.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Hexachlorobenzene	ND	7.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Hexachlorobutadiene	ND	5.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Hexachlorocyclopentadiene	ND	5.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Hexachloroethane	ND	5.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Indeno(1,2,3-cd)pyrene	ND	5.6	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Isophorone	ND	8.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
1-Methylnaphthalene	ND	6.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2-Methylnaphthalene	ND	7.0	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2-Methylphenol	ND	8.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
3+4-Methylphenol	ND	7.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
N-Nitrosodi-n-propylamine	ND	7.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
N-Nitrosodimethylamine	ND	9.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
N-Nitrosodiphenylamine	ND	6.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Naphthalene	ND	5.9	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2-Nitroaniline	ND	9.0	10		µg/L	1	3/13/2016 8:49:35 PM	24121
3-Nitroaniline	ND	8.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
4-Nitroaniline	ND	9.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Nitrobenzene	ND	7.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2-Nitrophenol	ND	7.6	10		µg/L	1	3/13/2016 8:49:35 PM	24121
4-Nitrophenol	ND	6.7	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Pentachlorophenol	ND	7.6	20		µg/L	1	3/13/2016 8:49:35 PM	24121
Phenanthrene	ND	6.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Phenol	ND	5.1	10		µg/L	1	3/13/2016 8:49:35 PM	24121

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 2:25:00 PM
Lab ID: 1603154-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	5.5	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Pyridine	ND	6.7	10		µg/L	1	3/13/2016 8:49:35 PM	24121
1,2,4-Trichlorobenzene	ND	6.2	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2,4,5-Trichlorophenol	ND	8.4	10		µg/L	1	3/13/2016 8:49:35 PM	24121
2,4,6-Trichlorophenol	ND	8.8	10		µg/L	1	3/13/2016 8:49:35 PM	24121
Surr: 2-Fluorophenol	46.3	0	4.63-113		%Rec	1	3/13/2016 8:49:35 PM	24121
Surr: Phenol-d5	40.3	0	4.13-124		%Rec	1	3/13/2016 8:49:35 PM	24121
Surr: 2,4,6-Tribromophenol	72.1	0	5.14-132		%Rec	1	3/13/2016 8:49:35 PM	24121
Surr: Nitrobenzene-d5	76.8	0	9.13-140		%Rec	1	3/13/2016 8:49:35 PM	24121
Surr: 2-Fluorobiphenyl	78.6	0	10.8-132		%Rec	1	3/13/2016 8:49:35 PM	24121
Surr: 4-Terphenyl-d14	73.4	0	12.9-107		%Rec	1	3/13/2016 8:49:35 PM	24121
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	76	0.096	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Toluene	0.60	0.089	1.0	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
Ethylbenzene	9.8	0.11	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Methyl tert-butyl ether (MTBE)	260	2.1	10		µg/L	10	3/8/2016 5:15:00 PM	R32660
1,2,4-Trimethylbenzene	2.8	0.10	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,2-Dichloroethane (EDC)	0.62	0.053	1.0	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Naphthalene	1.4	0.083	2.0	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
1-Methylnaphthalene	13	0.20	4.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Acetone	34	0.88	10		µg/L	1	3/8/2016 5:43:10 PM	R32660
Bromobenzene	ND	0.080	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Bromoform	ND	0.10	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Bromomethane	ND	0.78	3.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
2-Butanone	5.5	0.32	10	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
Carbon disulfide	ND	0.60	10		µg/L	1	3/8/2016 5:43:10 PM	R32660
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Chloroethane	ND	0.15	2.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Chloroform	ND	0.089	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Chloromethane	ND	0.21	3.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 2:25:00 PM
Lab ID: 1603154-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Dibromomethane	ND	0.12	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,1-Dichloroethane	1.2	0.11	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,1-Dichloroethene	ND	0.076	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
2-Hexanone	ND	0.36	10		µg/L	1	3/8/2016 5:43:10 PM	R32660
Isopropylbenzene	1.4	0.098	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
4-Isopropyltoluene	0.38	0.14	1.0	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
4-Methyl-2-pentanone	1.9	0.15	10	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
n-Butylbenzene	0.27	0.16	3.0	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
n-Propylbenzene	1.5	0.13	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
sec-Butylbenzene	0.33	0.11	1.0	J	µg/L	1	3/8/2016 5:43:10 PM	R32660
Styrene	ND	0.095	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
tert-Butylbenzene	ND	0.096	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/8/2016 5:43:10 PM	R32660
Xylenes, Total	3.7	0.32	1.5		µg/L	1	3/8/2016 5:43:10 PM	R32660
Surr: 1,2-Dichloroethane-d4	96.5	0	70-130		%Rec	1	3/8/2016 5:43:10 PM	R32660

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 2:25:00 PM
Lab ID: 1603154-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	3/8/2016 5:43:10 PM	R32660
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	3/8/2016 5:43:10 PM	R32660
Surr: Toluene-d8	101	0	70-130		%Rec	1	3/8/2016 5:43:10 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EAST LDU
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 4:30:00 PM
Lab ID: 1603154-002
Matrix: AQUEOUS
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **KJH**	
Diesel Range Organics (DRO)	21	0.69	1.0		mg/L	1	3/7/2016 3:48:53 PM	24101
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2016 3:48:53 PM	24101
Surr: DNOP	99.6	0	70-141		%Rec	1	3/7/2016 3:48:53 PM	24101
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.6	0.25	0.50		mg/L	10	3/4/2016 5:17:55 PM	A32596
Surr: BFB	135	0	49.5-130	S	%Rec	10	3/4/2016 5:17:55 PM	A32596
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	0.12	0.0013	0.0020		mg/L	1	3/16/2016 3:40:42 PM	C32831
Cadmium	ND	0.00075	0.0020		mg/L	1	3/16/2016 3:40:42 PM	C32831
Chromium	0.41	0.0018	0.0060	*	mg/L	1	3/16/2016 3:40:42 PM	C32831
Copper	ND	0.0040	0.0060		mg/L	1	3/16/2016 3:40:42 PM	C32831
Iron	0.099	0.0091	0.020		mg/L	1	3/16/2016 3:40:42 PM	C32831
Manganese	7.5	0.0065	0.040	*	mg/L	20	3/16/2016 3:47:17 PM	C32831
Silver	ND	0.0028	0.0050		mg/L	1	3/28/2016 3:04:10 PM	A33103
Zinc	0.017	0.0028	0.010		mg/L	1	3/16/2016 3:40:42 PM	C32831
EPA METHOD 200.7: TOTAL METALS							Analyst: **MED**	
Barium	0.13	0.0011	0.0020		mg/L	1	3/15/2016 12:04:39 PM	24075
Cadmium	ND	0.00062	0.0020		mg/L	1	3/15/2016 12:04:39 PM	24075
Chromium	0.47	0.0022	0.0060	*	mg/L	1	3/15/2016 12:04:39 PM	24075
Copper	ND	0.0051	0.0060		mg/L	1	3/15/2016 12:04:39 PM	24075
Iron	1.5	0.036	0.10	*	mg/L	5	3/15/2016 12:06:25 PM	24075
Manganese	8.0	0.015	0.020	*	mg/L	10	3/16/2016 4:37:06 PM	24075
Silver	ND	0.0021	0.0050		mg/L	1	3/25/2016 8:10:00 AM	24413
Zinc	0.056	0.0039	0.010		mg/L	1	3/24/2016 12:18:48 PM	24075
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0048	0.000065	0.0010		mg/L	1	3/24/2016 6:03:04 PM	B33051
Lead	ND	0.00013	0.0025		mg/L	5	3/25/2016 5:50:17 PM	B33098
Selenium	0.0036	0.00019	0.0010		mg/L	1	3/24/2016 6:03:04 PM	B33051
Uranium	0.00044	0.000024	0.0025	J	mg/L	5	3/28/2016 7:02:23 PM	B33120
200.8 ICPMS METALS:TOTAL							Analyst: **JLF**	
Arsenic	0.0046	0.00029	0.0010		mg/L	1	3/11/2016 5:28:38 PM	24075
Lead	0.00026	0.000047	0.00050	J	mg/L	1	3/11/2016 5:28:38 PM	24075
Selenium	0.0013	0.00062	0.0050	J	mg/L	5	3/14/2016 6:51:10 PM	24075
Uranium	0.00048	0.0000049	0.00050	J	mg/L	1	3/11/2016 5:28:38 PM	24075
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000065	0.000053	0.00020	J	mg/L	1	3/4/2016 8:01:52 AM	24081

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EAST LDU
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 4:30:00 PM
Lab ID: 1603154-002 **Matrix:** AQUEOUS **Received Date:** 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **DJF**	
Benzene	410	4.8	50		µg/L	50	3/8/2016 6:11:27 PM	A32660
Toluene	30	4.5	50	J	µg/L	50	3/8/2016 6:11:27 PM	A32660
Ethylbenzene	270	5.6	50		µg/L	50	3/8/2016 6:11:27 PM	A32660
Methyl tert-butyl ether (MTBE)	11	11	50	J	µg/L	50	3/8/2016 6:11:27 PM	A32660
1,2,4-Trimethylbenzene	180	5.2	50		µg/L	50	3/8/2016 6:11:27 PM	A32660
1,3,5-Trimethylbenzene	310	5.8	50		µg/L	50	3/8/2016 6:11:27 PM	A32660
Xylenes, Total	140	16	75		µg/L	50	3/8/2016 6:11:27 PM	A32660
Surr: 1,2-Dichloroethane-d4	99.9	0	70-130		%Rec	50	3/8/2016 6:11:27 PM	A32660
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	50	3/8/2016 6:11:27 PM	A32660
Surr: Dibromofluoromethane	96.6	0	70-130		%Rec	50	3/8/2016 6:11:27 PM	A32660
Surr: Toluene-d8	101	0	70-130		%Rec	50	3/8/2016 6:11:27 PM	A32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: WEST LDU
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 4:50:00 PM
Lab ID: 1603154-003
Matrix: AQUEOUS
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **KJH**	
Diesel Range Organics (DRO)	7.2	0.69	1.0		mg/L	1	3/7/2016 4:10:42 PM	24101
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2016 4:10:42 PM	24101
Surr: DNOP	100	0	70-141		%Rec	1	3/7/2016 4:10:42 PM	24101
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.9	0.13	0.25		mg/L	5	3/4/2016 5:42:29 PM	A32596
Surr: BFB	98.8	0	49.5-130		%Rec	5	3/4/2016 5:42:29 PM	A32596
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	0.29	0.0013	0.0020		mg/L	1	3/16/2016 3:49:04 PM	C32831
Cadmium	ND	0.00075	0.0020		mg/L	1	3/16/2016 3:49:04 PM	C32831
Chromium	1.4	0.0088	0.030	*	mg/L	5	3/11/2016 5:29:22 PM	C32754
Copper	ND	0.0040	0.0060		mg/L	1	3/16/2016 3:49:04 PM	C32831
Iron	0.13	0.0091	0.020		mg/L	1	3/16/2016 3:49:04 PM	C32831
Manganese	0.99	0.0016	0.010	*	mg/L	5	3/11/2016 5:29:22 PM	C32754
Silver	ND	0.0028	0.0050		mg/L	1	3/28/2016 3:06:01 PM	A33103
Zinc	0.0073	0.0028	0.010	J	mg/L	1	3/16/2016 3:49:04 PM	C32831
EPA METHOD 200.7: TOTAL METALS							Analyst: **MED**	
Barium	0.31	0.0011	0.0020		mg/L	1	3/15/2016 12:08:22 PM	24075
Cadmium	ND	0.00062	0.0020		mg/L	1	3/15/2016 12:08:22 PM	24075
Chromium	1.5	0.011	0.030	*	mg/L	5	3/15/2016 12:10:16 PM	24075
Copper	ND	0.0051	0.0060		mg/L	1	3/15/2016 12:08:22 PM	24075
Iron	0.60	0.0072	0.020	*	mg/L	1	3/15/2016 12:08:22 PM	24075
Manganese	1.1	0.0076	0.010	*	mg/L	5	3/15/2016 12:10:16 PM	24075
Silver	ND	0.0021	0.0050		mg/L	1	3/25/2016 8:13:25 AM	24413
Zinc	0.018	0.0039	0.010		mg/L	1	3/24/2016 12:20:52 PM	24075
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0066	0.00032	0.0050		mg/L	5	3/24/2016 6:06:07 PM	B33051
Lead	ND	0.00026	0.0050		mg/L	10	3/25/2016 5:53:20 PM	B33098
Selenium	0.0073	0.00097	0.0050		mg/L	5	3/24/2016 6:06:07 PM	B33051
Uranium	0.00082	0.000048	0.0050	J	mg/L	10	3/28/2016 7:05:26 PM	B33120
200.8 ICPMS METALS:TOTAL							Analyst: **JLF**	
Arsenic	0.0051	0.00029	0.0010		mg/L	1	3/11/2016 5:31:38 PM	24075
Lead	0.00022	0.000047	0.00050	J	mg/L	1	3/11/2016 5:31:38 PM	24075
Selenium	0.0034	0.00062	0.0050	J	mg/L	5	3/14/2016 6:54:10 PM	24075
Uranium	0.00066	0.0000049	0.00050		mg/L	1	3/11/2016 5:31:38 PM	24075
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000072	0.000053	0.00020	J	mg/L	1	3/4/2016 8:03:51 AM	24081

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: WEST LDU
Project: Quarterly GW Sampling
Collection Date: 3/1/2016 4:50:00 PM
Lab ID: 1603154-003
Matrix: AQUEOUS
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **DJF**	
Benzene	260	1.9	20		µg/L	20	3/8/2016 6:39:45 PM	A32660
Toluene	53	1.8	20		µg/L	20	3/8/2016 6:39:45 PM	A32660
Ethylbenzene	27	2.2	20		µg/L	20	3/8/2016 6:39:45 PM	A32660
Methyl tert-butyl ether (MTBE)	ND	4.2	20		µg/L	20	3/8/2016 6:39:45 PM	A32660
1,2,4-Trimethylbenzene	6.8	2.1	20	J	µg/L	20	3/8/2016 6:39:45 PM	A32660
1,3,5-Trimethylbenzene	ND	2.3	20		µg/L	20	3/8/2016 6:39:45 PM	A32660
Xylenes, Total	47	6.5	30		µg/L	20	3/8/2016 6:39:45 PM	A32660
Surr: 1,2-Dichloroethane-d4	95.7	0	70-130		%Rec	20	3/8/2016 6:39:45 PM	A32660
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	20	3/8/2016 6:39:45 PM	A32660
Surr: Dibromofluoromethane	95.5	0	70-130		%Rec	20	3/8/2016 6:39:45 PM	A32660
Surr: Toluene-d8	98.8	0	70-130		%Rec	20	3/8/2016 6:39:45 PM	A32660

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Quarterly GW Sampling
Collection Date:
Lab ID: 1603154-004
Matrix: TRIP BLANK
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.096	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Toluene	ND	0.089	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Ethylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2,4-Trimethylbenzene	ND	0.10	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2-Dichloroethane (EDC)	ND	0.053	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Naphthalene	ND	0.083	2.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Acetone	ND	0.88	10		µg/L	1	3/8/2016 8:04:36 PM	R32660
Bromobenzene	ND	0.080	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Bromoform	ND	0.10	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Bromomethane	ND	0.78	3.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
2-Butanone	ND	0.32	10		µg/L	1	3/8/2016 8:04:36 PM	R32660
Carbon disulfide	ND	0.60	10		µg/L	1	3/8/2016 8:04:36 PM	R32660
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Chloroethane	ND	0.15	2.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Chloroform	ND	0.089	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Chloromethane	ND	0.21	3.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Dibromomethane	ND	0.12	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,1-Dichloroethene	ND	0.076	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/8/2016 8:04:36 PM	R32660

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Quarterly GW Sampling
Collection Date:
Lab ID: 1603154-004
Matrix: TRIP BLANK
Received Date: 3/2/2016 4:16:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
2-Hexanone	ND	0.36	10		µg/L	1	3/8/2016 8:04:36 PM	R32660
Isopropylbenzene	ND	0.098	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
4-Methyl-2-pentanone	ND	0.15	10		µg/L	1	3/8/2016 8:04:36 PM	R32660
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
n-Butylbenzene	ND	0.16	3.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
n-Propylbenzene	ND	0.13	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Styrene	ND	0.095	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
tert-Butylbenzene	ND	0.096	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/8/2016 8:04:36 PM	R32660
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/8/2016 8:04:36 PM	R32660
Surr: 1,2-Dichloroethane-d4	94.9	0	70-130		%Rec	1	3/8/2016 8:04:36 PM	R32660
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	3/8/2016 8:04:36 PM	R32660
Surr: Dibromofluoromethane	94.7	0	70-130		%Rec	1	3/8/2016 8:04:36 PM	R32660
Surr: Toluene-d8	101	0	70-130		%Rec	1	3/8/2016 8:04:36 PM	R32660

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

Qualifiers:

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

Anatek Labs, Inc.

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	160308009
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1603154
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	160308009-001	**Sampling Date**	3/1/2016	**Date/Time Received**	3/8/2016 10:35 AM
Client Sample ID	1603154-001G / OAPIS-1	**Sampling Time**	2:25 PM		
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0867	mg/L	0.01	3/9/2016	MER	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.

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	160308009
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1603154
Attn:	ANDY FREEMAN		

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.540	mg/L	0.5	108.0	90-110	3/9/2016	3/9/2016

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
160308005-001	Cyanide	ND	0.541	mg/L	0.5	108.2	90-110	3/9/2016	3/9/2016

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.542	mg/L	0.5	108.4	0.2	0-20	3/9/2016	3/9/2016

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	3/9/2016	3/9/2016

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

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; 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, March 11, 2016

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002498**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Manganese	ND	0.0020								

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002499**	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	99.2	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002500**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0058	0.0060	0.006000	0	97.3	50	150			J
Manganese	0.0018	0.0020	0.002000	0	92.5	50	150			J

Sample ID	**1603154-003CMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**WEST LDU**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002632**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	3.9	0.030	2.500	1.432	99.9	70	130			
Manganese	3.4	0.010	2.500	0.9891	98.3	70	130			

Sample ID	**1603154-003CMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**WEST LDU**	Batch ID:	**C32754**	RunNo:	**32754**					
Prep Date:		Analysis Date:	**3/11/2016**	SeqNo:	**1002636**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	3.8	0.030	2.500	1.432	96.6	70	130	2.10	20	
Manganese	3.4	0.010	2.500	0.9891	95.2	70	130	2.25	20	

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C32831**	RunNo:	**32831**					
Prep Date:		Analysis Date:	**3/16/2016**	SeqNo:	**1006189**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C32831**	RunNo: **32831**
Prep Date:	Analysis Date: **3/16/2016**	SeqNo: **1006189** Units: **mg/L**

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

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C32831**	RunNo: **32831**
Prep Date:	Analysis Date: **3/16/2016**	SeqNo: **1006190** 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	99.5	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Potassium	49	1.0	50.00	0	97.4	85	115			
Zinc	0.50	0.010	0.5000	0	99.8	85	115			

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C32831**	RunNo: **32831**
Prep Date:	Analysis Date: **3/16/2016**	SeqNo: **1006191** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	119	50	150			
Cadmium	0.0018	0.0020	0.002000	0	91.0	50	150			J
Chromium	0.0054	0.0060	0.006000	0	89.7	50	150			J
Copper	0.0042	0.0060	0.006000	0	69.8	50	150			J
Iron	0.019	0.020	0.02000	0	96.2	50	150			J
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.55	1.0	0.5000	0	110	50	150			J
Zinc	0.0057	0.010	0.005000	0	115	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**1603154-002CMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**EAST LDU**	Batch ID:	**C32831**		RunNo:	**32831**				
Prep Date:		Analysis Date:	**3/16/2016**		SeqNo:	**1006481**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.59	0.0020	0.5000	0.1190	94.4	70	130			
Cadmium	0.49	0.0020	0.5000	0	98.2	70	130			
Chromium	0.88	0.0060	0.5000	0.4057	95.5	70	130			
Copper	0.50	0.0060	0.5000	0	99.5	70	130			
Iron	0.56	0.020	0.5000	0.09893	92.8	70	130			
Zinc	0.48	0.010	0.5000	0.01739	91.6	70	130			

Sample ID	**1603154-002CMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**EAST LDU**	Batch ID:	**C32831**		RunNo:	**32831**				
Prep Date:		Analysis Date:	**3/16/2016**		SeqNo:	**1006482**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.60	0.0020	0.5000	0.1190	96.9	70	130	2.10	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	3.51	20	
Chromium	0.90	0.0060	0.5000	0.4057	98.3	70	130	1.58	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	1.27	20	
Iron	0.58	0.020	0.5000	0.09893	96.9	70	130	3.65	20	
Zinc	0.49	0.010	0.5000	0.01739	95.5	70	130	3.96	20	

Sample ID	**1603154-003CMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**WEST LDU**	Batch ID:	**C32831**		RunNo:	**32831**				
Prep Date:		Analysis Date:	**3/16/2016**		SeqNo:	**1006485**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.77	0.0020	0.5000	0.2898	97.0	70	130			
Cadmium	0.51	0.0020	0.5000	0	102	70	130			
Copper	0.49	0.0060	0.5000	0	98.8	70	130			
Iron	0.61	0.020	0.5000	0.1273	96.7	70	130			
Zinc	0.51	0.010	0.5000	0.007340	99.7	70	130			

Sample ID	**1603154-003CMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**WEST LDU**	Batch ID:	**C32831**		RunNo:	**32831**				
Prep Date:		Analysis Date:	**3/16/2016**		SeqNo:	**1006489**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.76	0.0020	0.5000	0.2898	94.1	70	130	1.92	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0	20	
Copper	0.50	0.0060	0.5000	0	99.2	70	130	0.406	20	
Iron	0.61	0.020	0.5000	0.1273	95.8	70	130	0.736	20	
Zinc	0.48	0.010	0.5000	0.007340	95.1	70	130	4.73	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B32891**	RunNo:	**32891**					
Prep Date:		Analysis Date:	**3/18/2016**	SeqNo:	**1008295**	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								

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B32891**	RunNo:	**32891**					
Prep Date:		Analysis Date:	**3/18/2016**	SeqNo:	**1008299**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Manganese	0.49	0.0020	0.5000	0	98.0	85	115			
Sodium	50	1.0	50.00	0	99.0	85	115			

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B32891**	RunNo:	**32891**					
Prep Date:		Analysis Date:	**3/18/2016**	SeqNo:	**1008300**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Iron	0.023	0.020	0.02000	0	114	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0042	0.0050	0.005000	0	83.8	50	150			J
Sodium	0.54	1.0	0.5000	0	108	50	150			J

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B32891**	RunNo:	**32891**					
Prep Date:		Analysis Date:	**3/18/2016**	SeqNo:	**1008304**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.099	0.0050	0.1000	0	98.9	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A33103**	RunNo:	**33103**					
Prep Date:		Analysis Date:	**3/28/2016**	SeqNo:	**1015961**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A33103**	RunNo:	**33103**					
Prep Date:		Analysis Date:	**3/28/2016**	SeqNo:	**1015962**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.0	85	115			

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A33103**	RunNo:	**33103**					
Prep Date:		Analysis Date:	**3/28/2016**	SeqNo:	**1015963**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0048	0.0050	0.005000	0	95.2	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-24075**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**24075**	RunNo:	**32607**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/7/2016**	SeqNo:	**997674**	Units:	**mg/L**			

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

Sample ID	**LCS-24075**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**24075**	RunNo:	**32607**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/7/2016**	SeqNo:	**997675**	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	99.0	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	96.6	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID	**LLLCS-24075**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**24075**	RunNo:	**32607**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/7/2016**	SeqNo:	**997676**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	84.0	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0059	0.0060	0.006000	0	98.0	50	150			J
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0022	0.0020	0.002000	0	111	50	150			
Zinc	0.0057	0.010	0.005000	0	115	50	150			J

Sample ID	**MB-24115**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**24115**	RunNo:	**32673**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**999895**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-24115**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**24115**	RunNo:	**32673**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**999895**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								

Sample ID	**LCS-24115**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**24115**	RunNo:	**32673**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**999896**	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	0.52	0.0020	0.5000	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.6	85	115			

Sample ID	**LLLCS-24115**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**24115**	RunNo:	**32673**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**999897**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	120	50	150			
Cadmium	0.0018	0.0020	0.002000	0	91.5	50	150			J
Chromium	0.0063	0.0060	0.006000	0	106	50	150			
Copper	0.0052	0.0060	0.006000	0	86.8	50	150			J
Iron	0.024	0.020	0.02000	0	119	50	150			
Manganese	0.0023	0.0020	0.002000	0	114	50	150			

Sample ID	**MB-24115**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**24115**	RunNo:	**32754**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/11/2016**	SeqNo:	**1002483**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**LCS-24115**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **24115**			RunNo: **32754**					
Prep Date:	**3/7/2016**	Analysis Date: **3/11/2016**			SeqNo: **1002484**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	**LLLCS-24115**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **24115**			RunNo: **32754**					
Prep Date:	**3/7/2016**	Analysis Date: **3/11/2016**			SeqNo: **1002485**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0059	0.010	0.005000	0	118	50	150			J

Sample ID	**MB-24413**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **24413**			RunNo: **33054**					
Prep Date:	**3/24/2016**	Analysis Date: **3/25/2016**			SeqNo: **1014136**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	**LCS-24413**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **24413**			RunNo: **33054**					
Prep Date:	**3/24/2016**	Analysis Date: **3/25/2016**			SeqNo: **1014137**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.099	0.0050	0.1000	0	99.2	85	115			

Sample ID	**LLLCS-24413**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **24413**			RunNo: **33054**					
Prep Date:	**3/24/2016**	Analysis Date: **3/25/2016**			SeqNo: **1014138**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0053	0.0050	0.005000	0	106	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B33051**	RunNo: **33051**
Prep Date:	Analysis Date: **3/24/2016**	SeqNo: **1014293** 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	95.5	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B33051**	RunNo: **33051**
Prep Date:	Analysis Date: **3/24/2016**	SeqNo: **1014294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Selenium	0.00099	0.0010	0.001000	0	98.8	50	150			J

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B33051**	RunNo: **33051**
Prep Date:	Analysis Date: **3/24/2016**	SeqNo: **1014295** 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								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B33098**	RunNo: **33098**
Prep Date:	Analysis Date: **3/25/2016**	SeqNo: **1015701** 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	0.012	0.00050	0.01250	0	93.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.7	85	115			

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B33098**	RunNo: **33098**
Prep Date:	Analysis Date: **3/25/2016**	SeqNo: **1015702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.2	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.5	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B33098**	RunNo: **33098**
Prep Date:	Analysis Date: **3/25/2016**	SeqNo: **1015703** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B33120**	RunNo: **33120**
Prep Date:	Analysis Date: **3/28/2016**	SeqNo: **1016767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	95.6	85	115			

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B33120**	RunNo: **33120**
Prep Date:	Analysis Date: **3/28/2016**	SeqNo: **1016769** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00049	0.00050	0.0005000	0	98.4	50	150			J

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B33120**	RunNo: **33120**
Prep Date:	Analysis Date: **3/28/2016**	SeqNo: **1016771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.000011	0.00050								J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-24075**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**24075**	RunNo:	**32687**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000380**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MB-24115**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**24115**	RunNo:	**32687**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000381**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLCS-24075**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**24075**	RunNo:	**32687**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000383**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.025	0.0010	0.02500	0	98.0	85	115			
Uranium	0.012	0.00050	0.01250	0	98.8	85	115			

Sample ID	**MSLCS-24115**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**24115**	RunNo:	**32687**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000384**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.7	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.024	0.0010	0.02500	0	97.7	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID	**MSLLLCS-24075**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**24075**	RunNo:	**32687**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000386**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MSLLLCS-24075**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**24075**	RunNo:	**32687**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000386**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00087	0.0010	0.001000	0	86.9	50	150			J
Lead	0.00046	0.00050	0.0005000	0	91.5	50	150			J
Selenium	0.00081	0.0010	0.001000	0	81.0	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	87.4	50	150			J

Sample ID	**MSLLLCS-24115**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**24115**	RunNo:	**32687**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/9/2016**	SeqNo:	**1000387**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00083	0.0010	0.001000	0	83.0	50	150			J
Lead	0.00038	0.00050	0.0005000	0	76.7	50	150			J
Selenium	0.00078	0.0010	0.001000	0	78.3	50	150			J
Uranium	0.00042	0.00050	0.0005000	0	83.3	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-24081**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**24081**	RunNo:	**32562**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/4/2016**	SeqNo:	**996234**	Units:	**mg/L**			

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

Sample ID	**LCS-24081**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**24081**	RunNo:	**32562**					
Prep Date:	**3/3/2016**	Analysis Date:	**3/4/2016**	SeqNo:	**996235**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	80	120			

Sample ID	**MB-24112**	SampType:	**mblk**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**24112**	RunNo:	**32641**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/8/2016**	SeqNo:	**998822**	Units:	**mg/L**			

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

Sample ID	**LCS-24112**	SampType:	**lcs**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**24112**	RunNo:	**32641**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/8/2016**	SeqNo:	**998823**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**
14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R32618**	RunNo: **32618**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997926** 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								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R32618**	RunNo: **32618**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997927** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Bromide	2.4	0.10	2.500	0	96.2	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.5	90	110			
Sulfate	9.7	0.50	10.00	0	97.3	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A32799**	RunNo: **32799**
Prep Date:	Analysis Date: **3/14/2016**	SeqNo: **1004878** 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: **A32799**	RunNo: **32799**
Prep Date:	Analysis Date: **3/14/2016**	SeqNo: **1004879** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.9	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R33179**	RunNo: **33179**
Prep Date:	Analysis Date: **3/29/2016**	SeqNo: **1018830** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R33179**	RunNo: **33179**							
Prep Date:	Analysis Date: **3/29/2016**	SeqNo: **1018831**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**
14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **LCS-24101**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **24101**	RunNo: **32603**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997914** 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	118	71.3	139			
Surr: DNOP	0.50		0.5000		99.7	70	141			

Sample ID **MB-24101**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **24101**	RunNo: **32603**
Prep Date: **3/7/2016**	Analysis Date: **3/7/2016**	SeqNo: **997915** 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	0.91		1.000		90.8	70	141			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997207** 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		95.0	49.5	130			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	103	80	120			
Surr: BFB	21		20.00		106	49.5	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **A32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999316** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **A32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999317** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**
14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999254** 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999254** 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	0.19	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	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	9.9		10.00		99.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999255** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999255** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**
14-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **mb-24121**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **24121**	RunNo: **32760**
Prep Date: **3/8/2016**	Analysis Date: **3/13/2016**	SeqNo: **1003941** 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **mb-24121**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **24121**	RunNo: **32760**	
Prep Date: **3/8/2016**	Analysis Date: **3/13/2016**	SeqNo: **1003941**	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	250		200.0		123	4.63	113			S
Surr: Phenol-d5	260		200.0		131	4.13	124			S
Surr: 2,4,6-Tribromophenol	230		200.0		116	5.14	132			
Surr: Nitrobenzene-d5	130		100.0		128	9.13	140			
Surr: 2-Fluorobiphenyl	120		100.0		118	10.8	132			
Surr: 4-Terphenyl-d14	130		100.0		131	12.9	107			S

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603154**

14-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID	**lcs-24121**	SampType:	**LCS**	TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSW**	Batch ID:	**24121**	RunNo:	**32760**					
Prep Date:	**3/8/2016**	Analysis Date:	**3/13/2016**	SeqNo:	**1003943**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	100	10	100.0	0	104	40.2	107			
4-Chloro-3-methylphenol	250	10	200.0	0	125	48.2	107			S
2-Chlorophenol	220	10	200.0	0	110	42.5	106			S
1,4-Dichlorobenzene	110	10	100.0	0	109	31.6	111			
2,4-Dinitrotoluene	78	10	100.0	0	78.1	33.6	86.5			
N-Nitrosodi-n-propylamine	110	10	100.0	0	108	44	106			S
4-Nitrophenol	180	10	200.0	0	88.4	25.5	109			
Pentachlorophenol	170	20	200.0	0	84.6	38.8	97.8			
Phenol	210	10	200.0	0	107	22.7	116			
Pyrene	100	10	100.0	0	103	29.3	138			
1,2,4-Trichlorobenzene	110	10	100.0	0	115	35.3	123			
Surr: 2-Fluorophenol	180		200.0		88.4	4.63	113			
Surr: Phenol-d5	200		200.0		101	4.13	124			
Surr: 2,4,6-Tribromophenol	230		200.0		113	5.14	132			
Surr: Nitrobenzene-d5	96		100.0		96.0	9.13	140			
Surr: 2-Fluorobiphenyl	90		100.0		90.5	10.8	132			
Surr: 4-Terphenyl-d14	99		100.0		99.4	12.9	107			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1603154 RcptNo: 1

Received by/date: 03/02/16

Logged By: Ashley Gallegos 3/2/2016 4:15:00 PM

Completed By: Ashley Gallegos 3/3/2016 9:44:48 AM

Reviewed By: 03/03/16

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° 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 ☑ AJ	No ☑	
9. Was preservative added to bottles?	Yes ☑	No ☑ AJ	NA ☐ See remarks
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: 8 (<2 or >12 unless noted)

Adjusted? Yes

Checked by AJ 3/3/16

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 HNO_3 to -001F
added 0.4 mL HNO_3 to -002C For acceptable pH
AJ 3/03/16 1345

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: QUARTERLY GW SAMPLING
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Major Cations / Anions	WQCC (Total & Dissolved) Metals		Cyanide	Air Bubbles (Y or N)
3/1/16	1425	WATER	OAPIS-1	40 mL VOA-6	HCL	1603158-001			✓							✓						
				1 LITER AMBER-2	NEAT												✓					
				250 mL AMBER-1	NEAT				✓													
				125 mL PLASTIC-1	H_2SO_4													✓				
				125 mL PLASTIC-1	HNO_3													✓	✓			
				500 mL PLASTIC-1	HNO_3														✓			
				500 mL PLASTIC-1	NEAT														✓			
				500 mL PLASTIC-1	NAOH																✓	
3/1/16	1630	WATER	EAST LDU	40 mL VOA-6	HCL	1603158-002	✓		✓													
				250 mL AMBER-1	NEAT				✓													
				125 mL PLASTIC-1	HNO_3														✓			
				500 mL PLASTIC-1	HNO_3														✓			

Date: 3/2/16 Time: 0725 Relinquished by:
Received by: Date 3/3/16 Time 1315

Date: 3-2-16 Time: 1616 Relinquished by:
Received by: Date 03/02/16 Time 1616

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.

Chain-of-Custody Record

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

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: QUARTERLY GW SAMPLING
Project #:
Project Manager: CHERYL JOHNSON
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1°C

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.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC Metals (TOTAL & DISSOLVED)			Air Bubbles (Y or N)
3/1/16	1650	WATER	WEST LDU	40 ML VOA-6	HCL	1603154-003	✓		✓												
↓	↓	↓	↓	250 ML AMBER-1	NEAT				✓												
				125 ML PLASTIC-1	HNO_3													✓			
				500 ML PLASTIC-1	HNO_3													✓			
—	—	WATER	TRIP BLANK	40 ML VOA-4	HCL	-004										✓					

Date	Time	Relinquished by:	Received by:	Date	Time
3/2/16	0725			3/2/16	1315
3/2/16	1616			03/03/16	1010

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

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

April 05, 2016

Cheryl Johnson

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

RE: Quarterly GW Sampling OrderNo.: 1603229

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/3/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 9:40:00 AM
Lab ID: 1603229-001 **Matrix:** AQUEOUS **Received Date:** 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	3/7/2016 4:32:23 PM	24101
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2016 4:32:23 PM	24101
Surr: DNOP	101	0	70-141		%Rec	1	3/7/2016 4:32:23 PM	24101
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.063	0.025	0.050		mg/L	1	3/4/2016 6:06:53 PM	A32596
Surr: BFB	95.0	0	49.5-130		%Rec	1	3/4/2016 6:06:53 PM	A32596
EPA METHOD 300.0: ANIONS							Analyst: **JRR**	
Fluoride	0.96	0.023	0.10		mg/L	1	3/4/2016 12:46:56 PM	R32618
Chloride	110	0.55	10		mg/L	20	3/4/2016 12:59:20 PM	R32618
Nitrogen, Nitrite (As N)	ND	0.042	0.10		mg/L	1	3/4/2016 12:46:56 PM	R32618
Bromide	0.92	0.032	0.10		mg/L	1	3/4/2016 12:46:56 PM	R32618
Nitrogen, Nitrate (As N)	0.71	0.042	0.10		mg/L	1	3/4/2016 12:46:56 PM	R32618
Phosphorus, Orthophosphate (As P)	ND	0.22	0.50		mg/L	1	3/4/2016 12:46:56 PM	R32618
Sulfate	34	0.064	0.50		mg/L	1	3/4/2016 12:46:56 PM	R32618
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Calcium	67	0.26	1.0		mg/L	1	3/18/2016 4:48:44 PM	C32891
Magnesium	12	0.013	1.0		mg/L	1	3/18/2016 4:48:44 PM	C32891
Potassium	0.73	0.18	1.0	J	mg/L	1	3/18/2016 4:48:44 PM	C32891
Sodium	270	0.48	5.0		mg/L	5	3/23/2016 4:41:40 PM	C33001
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	5.4	0.096	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Toluene	ND	0.089	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Ethylbenzene	2.7	0.11	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Methyl tert-butyl ether (MTBE)	15	0.21	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2,4-Trimethylbenzene	ND	0.10	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2-Dichloroethane (EDC)	ND	0.053	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Naphthalene	0.77	0.083	2.0	J	µg/L	1	3/8/2016 8:32:44 PM	R32660
1-Methylnaphthalene	0.33	0.20	4.0	J	µg/L	1	3/8/2016 8:32:44 PM	R32660
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Acetone	ND	0.88	10		µg/L	1	3/8/2016 8:32:44 PM	R32660
Bromobenzene	ND	0.080	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Bromoform	ND	0.10	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Bromomethane	ND	0.78	3.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
2-Butanone	ND	0.32	10		µg/L	1	3/8/2016 8:32:44 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 9:40:00 AM
Lab ID: 1603229-001 **Matrix:** AQUEOUS **Received Date:** 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Carbon disulfide	ND	0.60	10		µg/L	1	3/8/2016 8:32:44 PM	R32660
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Chloroethane	ND	0.15	2.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Chloroform	ND	0.089	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Chloromethane	ND	0.21	3.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Dibromomethane	ND	0.12	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,1-Dichloroethene	ND	0.076	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
2-Hexanone	ND	0.36	10		µg/L	1	3/8/2016 8:32:44 PM	R32660
Isopropylbenzene	0.16	0.098	1.0	J	µg/L	1	3/8/2016 8:32:44 PM	R32660
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
4-Methyl-2-pentanone	ND	0.15	10		µg/L	1	3/8/2016 8:32:44 PM	R32660
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
n-Butylbenzene	ND	0.16	3.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
n-Propylbenzene	ND	0.13	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Styrene	ND	0.095	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
tert-Butylbenzene	0.11	0.096	1.0	J	µg/L	1	3/8/2016 8:32:44 PM	R32660
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 9:40:00 AM
Lab ID: 1603229-001 **Matrix:** AQUEOUS **Received Date:** 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/8/2016 8:32:44 PM	R32660
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/8/2016 8:32:44 PM	R32660
Surr: 1,2-Dichloroethane-d4	95.5	0	70-130		%Rec	1	3/8/2016 8:32:44 PM	R32660
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	3/8/2016 8:32:44 PM	R32660
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	3/8/2016 8:32:44 PM	R32660
Surr: Toluene-d8	99.1	0	70-130		%Rec	1	3/8/2016 8:32:44 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 11:40:00 AM
Lab ID: 1603229-002
Matrix: AQUEOUS
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	3/7/2016 4:54:13 PM	24101
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2016 4:54:13 PM	24101
Surr: DNOP	102	0	70-141		%Rec	1	3/7/2016 4:54:13 PM	24101
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.046	0.025	0.050	J	mg/L	1	3/4/2016 6:31:15 PM	A32596
Surr: BFB	93.9	0	49.5-130		%Rec	1	3/4/2016 6:31:15 PM	A32596
EPA METHOD 300.0: ANIONS							Analyst: **JRR**	
Fluoride	0.20	0.023	0.10		mg/L	1	3/4/2016 1:36:35 PM	R32618
Chloride	1100	2.7	50		mg/L	100	3/15/2016 10:00:20 PM	R32822
Nitrogen, Nitrite (As N)	ND	0.83	2.0		mg/L	20	3/4/2016 2:13:49 PM	R32618
Bromide	1.3	0.032	0.10		mg/L	1	3/4/2016 1:36:35 PM	R32618
Nitrogen, Nitrate (As N)	0.40	0.042	0.10		mg/L	1	3/4/2016 1:36:35 PM	R32618
Phosphorus, Orthophosphate (As P)	ND	0.22	0.50		mg/L	1	3/4/2016 1:36:35 PM	R32618
Sulfate	200	1.3	10		mg/L	20	3/4/2016 2:13:49 PM	R32618
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.067	0.0013	0.0020		mg/L	1	3/18/2016 4:52:34 PM	C32891
Cadmium	ND	0.00075	0.0020		mg/L	1	3/18/2016 4:52:34 PM	C32891
Calcium	110	1.3	5.0		mg/L	5	3/18/2016 5:02:20 PM	C32891
Chromium	ND	0.0018	0.0060		mg/L	1	3/18/2016 4:52:34 PM	C32891
Copper	ND	0.0040	0.0060		mg/L	1	3/18/2016 4:52:34 PM	C32891
Iron	ND	0.0091	0.020		mg/L	1	3/18/2016 4:52:34 PM	C32891
Magnesium	22	0.013	1.0		mg/L	1	3/18/2016 4:52:34 PM	C32891
Manganese	0.12	0.00032	0.0020	*	mg/L	1	3/18/2016 4:52:34 PM	C32891
Potassium	2.2	0.18	1.0		mg/L	1	3/18/2016 4:52:34 PM	C32891
Silver	ND	0.0028	0.0050		mg/L	1	3/18/2016 4:52:34 PM	C32891
Sodium	840	0.96	10		mg/L	10	3/23/2016 4:43:33 PM	C33001
Zinc	0.014	0.0028	0.010		mg/L	1	3/18/2016 4:52:34 PM	C32891
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.068	0.0011	0.0020		mg/L	1	3/18/2016 3:53:00 PM	24150
Cadmium	ND	0.00062	0.0020		mg/L	1	3/18/2016 3:53:00 PM	24150
Chromium	ND	0.0022	0.0060		mg/L	1	3/18/2016 3:53:00 PM	24150
Copper	ND	0.0051	0.0060		mg/L	1	3/18/2016 3:53:00 PM	24150
Iron	ND	0.0072	0.020		mg/L	1	3/18/2016 3:53:00 PM	24150
Manganese	0.11	0.0015	0.0020	*	mg/L	1	3/18/2016 3:53:00 PM	24150
Silver	0.0038	0.0021	0.0050	J	mg/L	1	3/18/2016 3:53:00 PM	24150
Zinc	ND	0.0039	0.010		mg/L	1	3/18/2016 3:53:00 PM	24150
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 11:40:00 AM
Lab ID: 1603229-002
Matrix: AQUEOUS
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0018	0.00032	0.0050	J	mg/L	5	3/25/2016 5:56:24 PM	B33098
Lead	0.00020	0.00013	0.0025	J	mg/L	5	3/25/2016 5:56:24 PM	B33098
Selenium	0.013	0.0039	0.020	J	mg/L	20	3/25/2016 5:59:27 PM	B33098
Uranium	0.057	0.000024	0.0025	*	mg/L	5	3/28/2016 7:08:29 PM	B33120
200.8 ICPMS METALS:TOTAL							Analyst: **JLF**	
Arsenic	0.0015	0.0015	0.0050	J	mg/L	5	3/17/2016 5:36:14 PM	24248
Lead	0.00026	0.00024	0.0025	J	mg/L	5	3/17/2016 5:36:14 PM	24248
Selenium	0.013	0.0025	0.020	J	mg/L	20	3/23/2016 3:52:26 PM	24248
Uranium	0.060	0.000025	0.0025	*	mg/L	5	3/17/2016 5:36:14 PM	24248
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000053	0.00020		mg/L	1	3/8/2016 11:32:33 AM	24112
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.096	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Toluene	ND	0.089	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Ethylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Methyl tert-butyl ether (MTBE)	39	0.21	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2,4-Trimethylbenzene	ND	0.10	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2-Dichloroethane (EDC)	0.55	0.053	1.0	J	µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Naphthalene	ND	0.083	2.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Acetone	ND	0.88	10		µg/L	1	3/8/2016 9:01:03 PM	R32660
Bromobenzene	ND	0.080	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Bromoform	ND	0.10	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Bromomethane	ND	0.78	3.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
2-Butanone	ND	0.32	10		µg/L	1	3/8/2016 9:01:03 PM	R32660
Carbon disulfide	ND	0.60	10		µg/L	1	3/8/2016 9:01:03 PM	R32660
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Chloroethane	ND	0.15	2.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Chloroform	ND	0.089	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Chloromethane	ND	0.21	3.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
cis-1,2-DCE	0.26	0.12	1.0	J	µg/L	1	3/8/2016 9:01:03 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 11:40:00 AM
Lab ID: 1603229-002 **Matrix:** AQUEOUS **Received Date:** 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Dibromomethane	ND	0.12	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,1-Dichloroethane	0.96	0.11	1.0	J	µg/L	1	3/8/2016 9:01:03 PM	R32660
1,1-Dichloroethene	0.91	0.076	1.0	J	µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
2-Hexanone	ND	0.36	10		µg/L	1	3/8/2016 9:01:03 PM	R32660
Isopropylbenzene	ND	0.098	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
4-Methyl-2-pentanone	ND	0.15	10		µg/L	1	3/8/2016 9:01:03 PM	R32660
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
n-Butylbenzene	ND	0.16	3.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
n-Propylbenzene	ND	0.13	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Styrene	ND	0.095	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
tert-Butylbenzene	ND	0.096	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/8/2016 9:01:03 PM	R32660
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/8/2016 9:01:03 PM	R32660

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Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 11:40:00 AM
Lab ID: 1603229-002
Matrix: AQUEOUS
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	97.9	0	70-130		%Rec	1	3/8/2016 9:01:03 PM	R32660
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	3/8/2016 9:01:03 PM	R32660
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	3/8/2016 9:01:03 PM	R32660
Surr: Toluene-d8	101	0	70-130		%Rec	1	3/8/2016 9:01:03 PM	R32660

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Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 2:05:00 PM
Lab ID: 1603229-003
Matrix: AQUEOUS
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	0.69	1.0		mg/L	1	3/7/2016 5:15:53 PM	24101
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2016 5:15:53 PM	24101
Surr: DNOP	102	0	70-141		%Rec	1	3/7/2016 5:15:53 PM	24101
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	3/4/2016 8:33:27 PM	A32596
Surr: BFB	89.7	0	49.5-130		%Rec	1	3/4/2016 8:33:27 PM	A32596
EPA METHOD 300.0: ANIONS							Analyst: **JRR**	
Fluoride	0.27	0.023	0.10		mg/L	1	3/4/2016 2:26:14 PM	R32618
Chloride	70	0.55	10		mg/L	20	3/4/2016 2:38:38 PM	R32618
Nitrogen, Nitrite (As N)	ND	0.042	0.10		mg/L	1	3/4/2016 2:26:14 PM	R32618
Bromide	0.42	0.032	0.10		mg/L	1	3/4/2016 2:26:14 PM	R32618
Nitrogen, Nitrate (As N)	0.25	0.042	0.10		mg/L	1	3/4/2016 2:26:14 PM	R32618
Phosphorus, Orthophosphate (As P)	ND	0.22	0.50		mg/L	1	3/4/2016 2:26:14 PM	R32618
Sulfate	160	1.3	10		mg/L	20	3/4/2016 2:38:38 PM	R32618
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.031	0.0013	0.0020		mg/L	1	3/18/2016 5:04:06 PM	C32891
Cadmium	ND	0.00075	0.0020		mg/L	1	3/18/2016 5:04:06 PM	C32891
Calcium	2.0	0.26	1.0		mg/L	1	3/18/2016 5:04:06 PM	C32891
Chromium	ND	0.0018	0.0060		mg/L	1	3/18/2016 5:04:06 PM	C32891
Copper	ND	0.0040	0.0060		mg/L	1	3/23/2016 4:45:29 PM	C33001
Iron	0.026	0.0091	0.020		mg/L	1	3/18/2016 5:04:06 PM	C32891
Magnesium	0.26	0.013	1.0	J	mg/L	1	3/18/2016 5:04:06 PM	C32891
Manganese	0.0074	0.00032	0.0020		mg/L	1	3/18/2016 5:04:06 PM	C32891
Potassium	0.91	0.18	1.0	J	mg/L	1	3/18/2016 5:04:06 PM	C32891
Silver	ND	0.0028	0.0050		mg/L	1	3/18/2016 5:04:06 PM	C32891
Sodium	330	0.48	5.0		mg/L	5	3/18/2016 5:06:06 PM	C32891
Zinc	0.062	0.0028	0.010		mg/L	1	3/18/2016 5:04:06 PM	C32891
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.044	0.0011	0.0020		mg/L	1	3/18/2016 3:55:01 PM	24150
Cadmium	ND	0.00062	0.0020		mg/L	1	3/18/2016 3:55:01 PM	24150
Chromium	0.0055	0.0022	0.0060	J	mg/L	1	3/18/2016 3:55:01 PM	24150
Copper	ND	0.0051	0.0060		mg/L	1	3/18/2016 3:55:01 PM	24150
Iron	0.71	0.0072	0.020	*	mg/L	1	3/18/2016 3:55:01 PM	24150
Manganese	0.034	0.0015	0.0020		mg/L	1	3/18/2016 3:55:01 PM	24150
Silver	ND	0.0021	0.0050		mg/L	1	3/18/2016 3:55:01 PM	24150
Zinc	0.021	0.0039	0.010		mg/L	1	3/18/2016 3:55:01 PM	24150
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 2:05:00 PM
Lab ID: 1603229-003
Matrix: AQUEOUS
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0012	0.00032	0.0050	J	mg/L	5	3/28/2016 7:11:33 PM	B33120
Lead	0.00015	0.000026	0.00050	J	mg/L	1	3/24/2016 6:18:24 PM	B33051
Selenium	0.0038	0.00019	0.0010		mg/L	1	3/24/2016 6:18:24 PM	B33051
Uranium	0.039	0.000024	0.0025	*	mg/L	5	3/28/2016 7:11:33 PM	B33120
200.8 ICPMS METALS:TOTAL							Analyst: **JLF**	
Arsenic	0.0016	0.0015	0.0050	J	mg/L	5	3/17/2016 5:39:14 PM	24248
Lead	0.0012	0.000047	0.00050		mg/L	1	3/17/2016 5:26:06 PM	24248
Selenium	0.0041	0.00062	0.0050	J	mg/L	5	3/17/2016 5:39:14 PM	24248
Uranium	0.042	0.000025	0.0025	*	mg/L	5	3/17/2016 5:39:14 PM	24248
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000057	0.000053	0.00020	J	mg/L	1	3/8/2016 11:34:33 AM	24112
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.096	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Toluene	ND	0.089	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Ethylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Methyl tert-butyl ether (MTBE)	0.74	0.21	1.0	J	µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2,4-Trimethylbenzene	ND	0.10	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2-Dichloroethane (EDC)	ND	0.053	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Naphthalene	ND	0.083	2.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Acetone	ND	0.88	10		µg/L	1	3/8/2016 9:29:17 PM	R32660
Bromobenzene	ND	0.080	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Bromoform	ND	0.10	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Bromomethane	ND	0.78	3.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
2-Butanone	ND	0.32	10		µg/L	1	3/8/2016 9:29:17 PM	R32660
Carbon disulfide	ND	0.60	10		µg/L	1	3/8/2016 9:29:17 PM	R32660
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Chloroethane	ND	0.15	2.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Chloroform	ND	0.089	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Chloromethane	ND	0.21	3.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 2:05:00 PM
Lab ID: 1603229-003 **Matrix:** AQUEOUS **Received Date:** 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Dibromomethane	ND	0.12	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,1-Dichloroethene	ND	0.076	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
2-Hexanone	ND	0.36	10		µg/L	1	3/8/2016 9:29:17 PM	R32660
Isopropylbenzene	ND	0.098	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
4-Methyl-2-pentanone	ND	0.15	10		µg/L	1	3/8/2016 9:29:17 PM	R32660
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
n-Butylbenzene	ND	0.16	3.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
n-Propylbenzene	ND	0.13	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Styrene	ND	0.095	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
tert-Butylbenzene	ND	0.096	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/8/2016 9:29:17 PM	R32660
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/8/2016 9:29:17 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Quarterly GW Sampling
Collection Date: 3/3/2016 2:05:00 PM
Lab ID: 1603229-003
Matrix: AQUEOUS
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	90.7	0	70-130		%Rec	1	3/8/2016 9:29:17 PM	R32660
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	3/8/2016 9:29:17 PM	R32660
Surr: Dibromofluoromethane	93.4	0	70-130		%Rec	1	3/8/2016 9:29:17 PM	R32660
Surr: Toluene-d8	99.7	0	70-130		%Rec	1	3/8/2016 9:29:17 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Quarterly GW Sampling
Collection Date:
Lab ID: 1603229-004
Matrix: TRIP BLANK
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	3/4/2016 8:57:46 PM	A32596
Surr: BFB	92.5	0	49.5-130		%Rec	1	3/4/2016 8:57:46 PM	A32596
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.096	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Toluene	ND	0.089	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Ethylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Methyl tert-butyl ether (MTBE)	ND	0.21	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2,4-Trimethylbenzene	ND	0.10	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,3,5-Trimethylbenzene	ND	0.12	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2-Dichloroethane (EDC)	ND	0.053	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2-Dibromoethane (EDB)	ND	0.11	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Naphthalene	ND	0.083	2.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1-Methylnaphthalene	ND	0.20	4.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
2-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Acetone	ND	0.88	10		µg/L	1	3/8/2016 9:57:33 PM	R32660
Bromobenzene	ND	0.080	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Bromodichloromethane	ND	0.098	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Bromoform	ND	0.10	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Bromomethane	ND	0.78	3.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
2-Butanone	ND	0.32	10		µg/L	1	3/8/2016 9:57:33 PM	R32660
Carbon disulfide	ND	0.60	10		µg/L	1	3/8/2016 9:57:33 PM	R32660
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Chlorobenzene	ND	0.10	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Chloroethane	ND	0.15	2.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Chloroform	ND	0.089	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Chloromethane	ND	0.21	3.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
4-Chlorotoluene	ND	0.13	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
cis-1,2-DCE	ND	0.12	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
cis-1,3-Dichloropropene	ND	0.10	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2-Dibromo-3-chloropropane	ND	0.15	2.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Dibromochloromethane	ND	0.087	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Dibromomethane	ND	0.12	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,3-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,4-Dichlorobenzene	ND	0.14	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Dichlorodifluoromethane	ND	0.32	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,1-Dichloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,1-Dichloroethene	ND	0.076	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Quarterly GW Sampling
Collection Date:
Lab ID: 1603229-004
Matrix: TRIP BLANK
Received Date: 3/3/2016 4:36:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dichloropropane	ND	0.047	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,3-Dichloropropane	ND	0.16	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
2,2-Dichloropropane	ND	0.12	2.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,1-Dichloropropene	ND	0.13	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Hexachlorobutadiene	ND	0.20	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
2-Hexanone	ND	0.36	10		µg/L	1	3/8/2016 9:57:33 PM	R32660
Isopropylbenzene	ND	0.098	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
4-Isopropyltoluene	ND	0.14	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
4-Methyl-2-pentanone	ND	0.15	10		µg/L	1	3/8/2016 9:57:33 PM	R32660
Methylene Chloride	ND	0.063	3.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
n-Butylbenzene	ND	0.16	3.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
n-Propylbenzene	ND	0.13	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Styrene	ND	0.095	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
tert-Butylbenzene	ND	0.096	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,1,1,2-Tetrachloroethane	ND	0.11	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,1,2,2-Tetrachloroethane	ND	0.11	2.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
trans-1,2-DCE	ND	0.40	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
trans-1,3-Dichloropropene	ND	0.085	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2,3-Trichlorobenzene	ND	0.11	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2,4-Trichlorobenzene	ND	0.13	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,1,1-Trichloroethane	ND	0.063	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,1,2-Trichloroethane	ND	0.077	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Trichloroethene (TCE)	ND	0.18	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Trichlorofluoromethane	ND	0.088	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
1,2,3-Trichloropropane	ND	0.11	2.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Vinyl chloride	ND	0.063	1.0		µg/L	1	3/8/2016 9:57:33 PM	R32660
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/8/2016 9:57:33 PM	R32660
Surr: 1,2-Dichloroethane-d4	95.1	0	70-130		%Rec	1	3/8/2016 9:57:33 PM	R32660
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	3/8/2016 9:57:33 PM	R32660
Surr: Dibromofluoromethane	95.0	0	70-130		%Rec	1	3/8/2016 9:57:33 PM	R32660
Surr: Toluene-d8	101	0	70-130		%Rec	1	3/8/2016 9:57:33 PM	R32660

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C32891**	RunNo: **32891**
Prep Date:	Analysis Date: **3/18/2016**	SeqNo: **1008301** 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-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C32891**	RunNo: **32891**
Prep Date:	Analysis Date: **3/18/2016**	SeqNo: **1008302** 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	99.1	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.6	85	115			
Chromium	0.49	0.0060	0.5000	0	97.0	85	115			
Copper	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.49	0.020	0.5000	0	98.4	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.49	0.0020	0.5000	0	97.8	85	115			
Potassium	50	1.0	50.00	0	99.4	85	115			
Sodium	51	1.0	50.00	0	101	85	115			
Zinc	0.48	0.010	0.5000	0	96.3	85	115			

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C32891**	RunNo: **32891**
Prep Date:	Analysis Date: **3/18/2016**	SeqNo: **1008303** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Cadmium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Calcium	0.50	1.0	0.5000	0	99.4	50	150			J
Chromium	0.0053	0.0060	0.006000	0	87.8	50	150			J
Copper	0.0068	0.0060	0.006000	0	114	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**LLLCS-C**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **C32891**			RunNo: **32891**					
Prep Date:		Analysis Date: **3/18/2016**			SeqNo: **1008303**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.021	0.020	0.02000	0	103	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.58	1.0	0.5000	0	115	50	150			J
Silver	0.0038	0.0050	0.005000	0	76.2	50	150			J
Sodium	0.55	1.0	0.5000	0	111	50	150			J
Zinc	0.0050	0.010	0.005000	0	100	50	150			J

Sample ID	**LCS-C**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **C32891**			RunNo: **32891**					
Prep Date:		Analysis Date: **3/18/2016**			SeqNo: **1008305**		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	101	85	115			

Sample ID	**MB-C**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **C33001**			RunNo: **33001**					
Prep Date:		Analysis Date: **3/23/2016**			SeqNo: **1012812**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Sodium	ND	1.0								

Sample ID	**LCS-C**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **C33001**			RunNo: **33001**					
Prep Date:		Analysis Date: **3/23/2016**			SeqNo: **1012813**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Sodium	50	1.0	50.00	0	99.6	85	115			

Sample ID	**LLLCS-C**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **C33001**			RunNo: **33001**					
Prep Date:		Analysis Date: **3/23/2016**			SeqNo: **1012814**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0074	0.0060	0.006000	0	124	50	150			
Sodium	0.57	1.0	0.5000	0	115	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-24150**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**24150**	RunNo:	**32831**					
Prep Date:	**3/9/2016**	Analysis Date:	**3/16/2016**	SeqNo:	**1006645**	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								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LCS-24150**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**24150**	RunNo:	**32831**					
Prep Date:	**3/9/2016**	Analysis Date:	**3/16/2016**	SeqNo:	**1006646**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Silver	0.094	0.0050	0.1000	0	93.7	85	115			
Zinc	0.50	0.010	0.5000	0	99.3	85	115			

Sample ID	**LLLCS-24150**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**24150**	RunNo:	**32831**					
Prep Date:	**3/9/2016**	Analysis Date:	**3/16/2016**	SeqNo:	**1006647**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	80.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.0	50	150			J
Chromium	0.0074	0.0060	0.006000	0	123	50	150			
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0019	0.0020	0.002000	0	93.0	50	150			J
Silver	0.0043	0.0050	0.005000	0	86.2	50	150			J
Zinc	0.0061	0.010	0.005000	0	122	50	150			J

Sample ID	**MB-24150**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**24150**	RunNo:	**32891**					
Prep Date:	**3/9/2016**	Analysis Date:	**3/18/2016**	SeqNo:	**1008286**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID	**LCS-24150**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **24150**			RunNo: **32891**					
Prep Date:	**3/9/2016**	Analysis Date: **3/18/2016**			SeqNo: **1008287**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.48	0.0060	0.5000	0	96.8	85	115			

Sample ID	**LLLCS-24150**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **24150**			RunNo: **32891**					
Prep Date:	**3/9/2016**	Analysis Date: **3/18/2016**			SeqNo: **1008288**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0058	0.0060	0.006000	0	97.3	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B33051**	RunNo: **33051**
Prep Date:	Analysis Date: **3/24/2016**	SeqNo: **1014293** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	94.4	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B33051**	RunNo: **33051**
Prep Date:	Analysis Date: **3/24/2016**	SeqNo: **1014294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	98.3	50	150			J
Selenium	0.00099	0.0010	0.001000	0	98.8	50	150			J

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B33051**	RunNo: **33051**
Prep Date:	Analysis Date: **3/24/2016**	SeqNo: **1014295** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B33098**	RunNo: **33098**
Prep Date:	Analysis Date: **3/25/2016**	SeqNo: **1015701** 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	0.012	0.00050	0.01250	0	93.0	85	115			
Selenium	0.023	0.0010	0.02500	0	92.7	85	115			

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B33098**	RunNo: **33098**
Prep Date:	Analysis Date: **3/25/2016**	SeqNo: **1015702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.2	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.5	50	150			J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B33098**	RunNo: **33098**
Prep Date:	Analysis Date: **3/25/2016**	SeqNo: **1015703** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B33120**	RunNo: **33120**
Prep Date:	Analysis Date: **3/28/2016**	SeqNo: **1016767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.2	85	115			
Uranium	0.012	0.00050	0.01250	0	95.6	85	115			

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B33120**	RunNo: **33120**
Prep Date:	Analysis Date: **3/28/2016**	SeqNo: **1016769** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Uranium	0.00049	0.00050	0.0005000	0	98.4	50	150			J

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B33120**	RunNo: **33120**
Prep Date:	Analysis Date: **3/28/2016**	SeqNo: **1016771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Uranium	0.000011	0.00050								J

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID	**MB-24248**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**24248**	RunNo:	**32847**					
Prep Date:	**3/15/2016**	Analysis Date:	**3/16/2016**	SeqNo:	**1006784**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	0.0000054	0.00050								J

Sample ID	**MSLCS-24248**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**24248**	RunNo:	**32847**					
Prep Date:	**3/15/2016**	Analysis Date:	**3/16/2016**	SeqNo:	**1006788**	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	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.3	85	115			
Uranium	0.012	0.00050	0.01250	0	99.9	85	115			

Sample ID	**MSLLLCS-24248**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**24248**	RunNo:	**32847**					
Prep Date:	**3/15/2016**	Analysis Date:	**3/16/2016**	SeqNo:	**1006793**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	112	50	150			
Lead	0.00049	0.00050	0.0005000	0	97.2	50	150			J
Selenium	0.00090	0.0010	0.001000	0	89.5	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**MB-24112**	SampType:	**mblk**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**24112**	RunNo:	**32641**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/8/2016**	SeqNo:	**998822**	Units:	**mg/L**			

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

Sample ID	**LCS-24112**	SampType:	**lcs**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**24112**	RunNo:	**32641**					
Prep Date:	**3/7/2016**	Analysis Date:	**3/8/2016**	SeqNo:	**998823**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R32618**	RunNo: **32618**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997926** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R32618**	RunNo: **32618**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997927** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Chloride	4.7	0.50	5.000	0	94.9	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	94.6	90	110			
Bromide	2.4	0.10	2.500	0	96.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.5	90	110			
Sulfate	9.7	0.50	10.00	0	97.3	90	110			

Sample ID **1603229-002CMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **OW-10**	Batch ID: **R32618**	RunNo: **32618**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.68	0.10	0.5000	0.1995	95.8	71.4	120			
Nitrogen, Nitrite (As N)	0.56	0.10	1.000	0	56.0	63.1	112			S
Bromide	2.9	0.10	2.500	1.310	62.9	74.9	117			S
Nitrogen, Nitrate (As N)	2.9	0.10	2.500	0.3980	99.7	87.3	111			
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	89.6	74.2	107			

Sample ID **1603229-002CMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **OW-10**	Batch ID: **R32618**	RunNo: **32618**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.69	0.10	0.5000	0.1995	97.3	71.4	120	1.10	20	
Nitrogen, Nitrite (As N)	0.57	0.10	1.000	0	57.5	63.1	112	2.52	20	S
Bromide	2.9	0.10	2.500	1.310	64.7	74.9	117	1.55	20	S

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**
05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**1603229-002CMSD**	SampType:	**MSD**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**OW-10**	Batch ID:	**R32618**		RunNo:	**32618**				
Prep Date:		Analysis Date:	**3/4/2016**		SeqNo:	**997940**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.9	0.10	2.500	0.3980	101	87.3	111	1.24	20	
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	90.6	74.2	107	1.12	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBW**	Batch ID:	**R32822**		RunNo:	**32822**				
Prep Date:		Analysis Date:	**3/15/2016**		SeqNo:	**1005748**	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:	**R32822**		RunNo:	**32822**				
Prep Date:		Analysis Date:	**3/15/2016**		SeqNo:	**1005749**	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	93.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID	**LCS-24101**	SampType: **LCS**		TestCode: **EPA Method 8015M/D: Diesel Range**						
Client ID:	**LCSW**	Batch ID: **24101**		RunNo: **32603**						
Prep Date:	**3/7/2016**	Analysis Date: **3/7/2016**		SeqNo: **997914**		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	118	71.3	139			
Surr: DNOP	0.50		0.5000		99.7	70	141			

Sample ID	**MB-24101**	SampType: **MBLK**		TestCode: **EPA Method 8015M/D: Diesel Range**						
Client ID:	**PBW**	Batch ID: **24101**		RunNo: **32603**						
Prep Date:	**3/7/2016**	Analysis Date: **3/7/2016**		SeqNo: **997915**		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	0.91		1.000		90.8	70	141			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997207** 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		95.0	49.5	130			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A32596**	RunNo: **32596**
Prep Date:	Analysis Date: **3/4/2016**	SeqNo: **997208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	103	80	120			
Surr: BFB	21		20.00		106	49.5	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup

Project: Quarterly GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999254** 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603229**

05-Apr-16

Client: Western Refining Southwest, Gallup
Project: Quarterly GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999254** 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	0.19	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	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	9.9		10.00		99.2	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R32660**	RunNo: **32660**
Prep Date:	Analysis Date: **3/8/2016**	SeqNo: **999255** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			

Qualifiers:

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