AP-111

AGWMR (13)

2014

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ~~AB~~ 09/22/14

~~2041~~ ANNUAL GW

Project #:

RW-1,-2,-5,-6

Project Manager:

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

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409434	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions								Air Bubbles (Y or N)
~~9/18/14~~																				
9/18/14	1050	H_2O	RW-6			-001	X	X	X	X	X									
9/18/14	1140	H_2O	RW-5			-002	X	X	X	X	X									
9/18/14	1215	H_2O	RW-2			-003	X	X	X	X	X									
9/18/14	1500	H_2O	RW-1			-004	X	X	X	X	X	per CT ~~AB~~ 09/22/14									
			Trip Blank ~~AB~~ 09/22/14			-005	X	X													
9/18/14	1235	H_2O	FB-Group8-9/18/14			-006	X													
9/17/14	1830	H_2O	OW-30			-007	X	X	X	X	X	X								
9/17/14	1005	H_2O	BW-2A			-008			X											
9/17/14	1000	H_2O	BW-2B			-009			X											

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/14	1245			09/19/14	1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

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

October 06, 2014

Cheryl Johnson

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

RE: 2014 Annual GW OrderNo.: 1409800

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001 **Matrix:** AQUEOUS **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **BCN**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 12:01:37 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 12:01:37 PM	15312
Surr: DNOP	99.8	59-141		%REC	1	9/18/2014 12:01:37 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.23	0.050		mg/L	1	9/17/2014 5:30:13 PM	R21267
Surr: BFB	1130	70.9-130	S	%REC	1	9/17/2014 5:30:13 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	ND	2.0		mg/L	20	9/17/2014 7:58:35 PM	R21283
Chloride	2500	100		mg/L	200	9/19/2014 5:34:16 AM	R21321
Bromide	2.9	2.0		mg/L	20	9/17/2014 7:58:35 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 7:46:11 PM	R21283
Sulfate	1400	100		mg/L	200	9/19/2014 5:34:16 AM	R21321
Nitrate+Nitrite as N	ND	2.0		mg/L	10	9/19/2014 3:37:53 AM	R21310
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JLF**	
Barium	0.015	0.0020		mg/L	1	9/18/2014 1:33:28 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:33:28 PM	R21290
Calcium	280	10		mg/L	10	9/19/2014 3:58:41 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:33:28 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:33:28 PM	R21290
Iron	0.049	0.020		mg/L	1	9/18/2014 1:33:28 PM	R21290
Magnesium	84	1.0		mg/L	1	9/18/2014 1:33:28 PM	R21290
Manganese	0.27	0.0020	*	mg/L	1	9/19/2014 3:56:50 PM	R21336
Potassium	3.7	1.0		mg/L	1	9/18/2014 1:33:28 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 3:56:50 PM	R21336
Sodium	2100	100		mg/L	100	9/19/2014 4:00:31 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 3:56:50 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Barium	0.013	0.0020		mg/L	1	9/18/2014 4:26:29 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:26:29 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:26:29 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:26:29 PM	15343
Iron	0.052	0.020		mg/L	1	9/18/2014 4:26:29 PM	15343
Manganese	0.28	0.0020	*	mg/L	1	9/18/2014 4:26:29 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:26:29 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:26:29 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Arsenic	ND	0.010		mg/L	10	9/26/2014 2:07:59 PM	R21493

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Lead	ND	0.020		mg/L	20	9/29/2014 4:19:00 PM	R21527
Selenium	0.021	0.010		mg/L	10	9/26/2014 2:07:59 PM	R21493
Uranium	0.11	0.020	*	mg/L	20	9/29/2014 4:19:00 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst: **DBD**	
Arsenic	ND	0.010		mg/L	10	9/29/2014 12:52:43 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:32:47 PM	15343
Selenium	0.019	0.010		mg/L	10	9/29/2014 12:52:43 PM	15343
Uranium	0.11	0.010	*	mg/L	10	9/29/2014 12:52:43 PM	15343
EPA METHOD 245.1: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:37:15 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Acenaphthylene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Aniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Anthracene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Azobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benz(a)anthracene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(a)pyrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(b)fluoranthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(g,h,i)perylene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(k)fluoranthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzoic acid	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzyl alcohol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-chloroethoxy)methane	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-chloroethyl)ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-chloroisopropyl)ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-ethylhexyl)phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Bromophenyl phenyl ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Butyl benzyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Carbazole	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Chloro-3-methylphenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Chloroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Chloronaphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Chlorophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Chlorophenyl phenyl ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Chrysene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Di-n-butyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Di-n-octyl phthalate	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001 **Matrix:** AQUEOUS **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Dibenzofuran	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,2-Dichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,3-Dichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,4-Dichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
3,3´-Dichlorobenzidine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Diethyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Dimethyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dichlorophenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dimethylphenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4,6-Dinitro-2-methylphenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dinitrophenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dinitrotoluene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,6-Dinitrotoluene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Fluoranthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Fluorene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachlorobutadiene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachlorocyclopentadiene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachloroethane	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Indeno(1,2,3-cd)pyrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Isophorone	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1-Methylnaphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Methylnaphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Methylphenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
3+4-Methylphenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
N-Nitrosodi-n-propylamine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
N-Nitrosodimethylamine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
N-Nitrosodiphenylamine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Naphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Nitroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
3-Nitroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Nitroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Nitrobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Nitrophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Nitrophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Pentachlorophenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
Phenanthrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Phenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001 **Matrix:** AQUEOUS **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Pyridine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,2,4-Trichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4,5-Trichlorophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4,6-Trichlorophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Surr: 2-Fluorophenol	63.6	12.1-85.8		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: Phenol-d5	54.6	17.7-65.8		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: 2,4,6-Tribromophenol	84.4	26-138		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: Nitrobenzene-d5	80.1	47.5-119		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: 2-Fluorobiphenyl	77.6	48.1-106		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: 4-Terphenyl-d14	91.4	44-113		%REC	1	9/19/2014 7:55:50 PM	15398
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Methyl tert-butyl ether (MTBE)	12	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001 **Matrix:** AQUEOUS **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 2:23:26 PM	R21319
Surr: 1,2-Dichloroethane-d4	93.5	70-130		%REC	1	9/19/2014 2:23:26 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	9/19/2014 2:23:26 PM	R21319
Surr: Dibromofluoromethane	94.1	70-130		%REC	1	9/19/2014 2:23:26 PM	R21319
Surr: Toluene-d8	68.1	70-130	S	%REC	1	9/19/2014 2:23:26 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **BCN**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 12:23:30 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 12:23:30 PM	15312
Surr: DNOP	104	59-141		%REC	1	9/18/2014 12:23:30 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 6:00:24 PM	R21267
Surr: BFB	95.3	70.9-130		%REC	1	9/17/2014 6:00:24 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	1.1	0.10		mg/L	1	9/17/2014 8:11:00 PM	R21283
Chloride	53	10		mg/L	20	9/17/2014 8:23:24 PM	R21283
Bromide	0.19	0.10		mg/L	1	9/17/2014 8:11:00 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 8:11:00 PM	R21283
Sulfate	150	10		mg/L	20	9/17/2014 8:23:24 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 3:50:18 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JLF**	
Barium	0.021	0.0020		mg/L	1	9/18/2014 1:35:30 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:35:30 PM	R21290
Calcium	4.5	1.0		mg/L	1	9/18/2014 1:35:30 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:35:30 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:35:30 PM	R21290
Iron	0.041	0.020		mg/L	1	9/18/2014 1:35:30 PM	R21290
Magnesium	1.2	1.0		mg/L	1	9/18/2014 1:35:30 PM	R21290
Manganese	0.0033	0.0020		mg/L	1	9/19/2014 4:02:18 PM	R21336
Potassium	1.4	1.0		mg/L	1	9/18/2014 1:35:30 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 4:02:18 PM	R21336
Sodium	300	10		mg/L	10	9/19/2014 4:04:16 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 4:02:18 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Barium	0.024	0.0020		mg/L	1	9/18/2014 4:28:20 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:28:20 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:28:20 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:28:20 PM	15343
Iron	0.35	0.020	*	mg/L	1	9/18/2014 4:28:20 PM	15343
Manganese	0.012	0.0020		mg/L	1	9/18/2014 4:28:20 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:28:20 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:28:20 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Arsenic	0.0033	0.0010		mg/L	1	9/26/2014 11:01:10 AM	R21493

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Lead	ND	0.010		mg/L	10	9/29/2014 4:22:06 PM	R21527
Selenium	0.0013	0.0010		mg/L	1	9/26/2014 11:01:10 AM	R21493
Uranium	0.033	0.010	*	mg/L	10	9/29/2014 4:22:06 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst: **DBD**	
Arsenic	0.0034	0.0010		mg/L	1	9/23/2014 5:35:53 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:35:53 PM	15343
Selenium	0.0013	0.0010		mg/L	1	9/23/2014 5:35:53 PM	15343
Uranium	0.037	0.0010	*	mg/L	1	9/23/2014 5:35:53 PM	15343
EPA METHOD 245.1: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:39:06 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002 **Matrix:** AQUEOUS **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Surr: 2-Fluorophenol	71.8	12.1-85.8		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: Phenol-d5	59.8	17.7-65.8		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: 2,4,6-Tribromophenol	71.8	26-138		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: Nitrobenzene-d5	85.5	47.5-119		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: 2-Fluorobiphenyl	85.2	48.1-106		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: 4-Terphenyl-d14	87.2	44-113		%REC	1	9/18/2014 6:27:13 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 2:53:12 PM	R21319
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	99.7	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319
Surr: Dibromofluoromethane	104	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319
Surr: Toluene-d8	88.0	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 11-9/11/14
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 11-9/11/14
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 3:22:55 PM	R21319
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319
Surr: Dibromofluoromethane	106	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319
Surr: Toluene-d8	86.1	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 6:30:35 PM	R21267
Surr: BFB	94.6	70.9-130		%REC	1	9/17/2014 6:30:35 PM	R21267
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 3:52:39 PM	R21319
Surr: 1,2-Dichloroethane-d4	96.7	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319
Surr: Dibromofluoromethane	100	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319
Surr: Toluene-d8	87.1	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319

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

Qualifiers:

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

Anatek Labs, Inc.

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

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140918049
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1409800
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140918049-001	**Sampling Date**	9/11/2014	**Date/Time Received**	9/18/2014	12:15 PM	
Client Sample ID	1409800-001H / SMW-2	**Sampling Time**	3:10 PM				
Matrix	Water						
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0456	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Sample Number	140918049-002	**Sampling Date**	9/11/2014	**Date/Time Received**	9/18/2014	12:15 PM	
Client Sample ID	1409800-002H / SMW-4	**Sampling Time**	4:40 PM				
Matrix	Water						
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

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

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

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0026; NM: 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.

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

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

Batch #: 140918049
Project Name: 1409800

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.512	mg/L	0.5	102.4	90-110	9/22/2014	9/22/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140918049-002	Cyanide	ND	0.550	mg/L	0.5	110.0	90-110	9/22/2014	9/22/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.521	mg/L	0.5	104.2	5.4	0-20	9/22/2014	9/22/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/22/2014	9/22/2014

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

Comments:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621146** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621149** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Calcium	48	1.0	50.00	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Iron	0.50	0.020	0.5000	0	99.0	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID **LCS TEST**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID **LCS Ag**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID **LCS Ag**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622781** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15343**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**15343**	RunNo:	**21297**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621503** 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-15343**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**15343**	RunNo:	**21297**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.9	85	115			

Sample ID	**LCS Ag-15343**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**15343**	RunNo:	**21297**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628610** Units: **mg/L**

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

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628611** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629895** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**LCS**	SampType: **LCS**		TestCode: **EPA 200.8: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **R21527**		RunNo: **21527**						
Prep Date:		Analysis Date: **9/29/2014**		SeqNo: **629895**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID	**MB**	SampType: **MBLK**		TestCode: **EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **R21527**		RunNo: **21527**						
Prep Date:		Analysis Date: **9/29/2014**		SeqNo: **629896**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	**MB**	SampType: **MBLK**		TestCode: **EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **R21527**		RunNo: **21527**						
Prep Date:		Analysis Date: **9/29/2014**		SeqNo: **629897**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**LLLCS-15343**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**BatchQC**	Batch ID:	**15343**	RunNo:	**21376**
Prep Date:	**9/17/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**624955** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID	**MB-15343**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**PBW**	Batch ID:	**15343**	RunNo:	**21376**
Prep Date:	**9/17/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**624958** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**15449**	RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625480**	Units:	**mg/L**			

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

Sample ID	**LCS-15449**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**15449**	RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625481**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R21283**	RunNo: **21283**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R21283**	RunNo: **21283**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Chloride	4.6	0.50	5.000	0	92.4	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R21310**	RunNo: **21310**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621823** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R21310**	RunNo: **21310**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621824** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R21321**	RunNo: **21321**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R21321**	RunNo: **21321**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			
Sulfate	9.6	0.50	10.00	0	96.2	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15312**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619740**	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	0.99		1.000		99.1	59	141			

Sample ID	**LCS-15312**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619860**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	69.7	142			
Surr: DNOP	0.49		0.5000		98.9	59	141			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R21267**	RunNo:	**21267**					
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620386**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.0	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R21267**	RunNo:	**21267**					
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620387**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	80	120			
Surr: BFB	19		20.00		93.9	70.9	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622116** 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
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622116** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	8.8		10.00		87.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622118** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	19	1.0	20.00	0	95.1	80	120			
Chlorobenzene	18	1.0	20.00	0	92.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622118** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	116	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	97.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **lcs-15342**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **15342**	RunNo: **21301**
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **15342**	RunNo: **21301**
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**15342**		RunNo:	**21301**				
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**		SeqNo:	**621611**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Sample ID	**mb-15398**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**15398**		RunNo:	**21328**				
Prep Date:	**9/19/2014**	Analysis Date:	**9/19/2014**		SeqNo:	**622451**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15398**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **15398**	RunNo: **21328**
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **622451** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **mb-15398**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **15398**	RunNo: **21328**
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **622451** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.5	12.1	85.8			
Surr: Phenol-d5	110		200.0		52.8	17.7	65.8			
Surr: 2,4,6-Tribromophenol	120		200.0		60.2	26	138			
Surr: Nitrobenzene-d5	68		100.0		67.7	47.5	119			
Surr: 2-Fluorobiphenyl	59		100.0		59.1	48.1	106			
Surr: 4-Terphenyl-d14	62		100.0		62.2	44	113			

Sample ID **lcs-15398**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **15398**	RunNo: **21328**
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **622452** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	70.8	47.9	114			
4-Chloro-3-methylphenol	170	10	200.0	0	84.8	51.7	122			
2-Chlorophenol	160	10	200.0	0	81.5	40.7	113			
1,4-Dichlorobenzene	64	10	100.0	0	63.9	39.6	99.9			
2,4-Dinitrotoluene	60	10	100.0	0	59.8	40.8	113			
N-Nitrosodi-n-propylamine	76	10	100.0	0	75.5	51.2	111			
4-Nitrophenol	110	10	200.0	0	56.8	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	63.9	21.6	104			
Phenol	130	10	200.0	0	66.8	28.6	71.7			
Pyrene	69	10	100.0	0	68.9	54.2	128			
1,2,4-Trichlorobenzene	62	10	100.0	0	62.1	40.9	101			
Surr: 2-Fluorophenol	140		200.0		69.1	12.1	85.8			
Surr: Phenol-d5	120		200.0		60.4	17.7	65.8			
Surr: 2,4,6-Tribromophenol	140		200.0		70.8	26	138			
Surr: Nitrobenzene-d5	75		100.0		75.4	47.5	119			
Surr: 2-Fluorobiphenyl	69		100.0		68.7	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		72.5	44	113			

Sample ID **lcsd-15398**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **15398**	RunNo: **21328**
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **622453** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.1	47.9	114	6.84	27.2	
4-Chloro-3-methylphenol	170	10	200.0	0	84.3	51.7	122	0.485	25.9	
2-Chlorophenol	160	10	200.0	0	81.9	40.7	113	0.575	22.5	
1,4-Dichlorobenzene	64	10	100.0	0	64.3	39.6	99.9	0.718	24.6	
2,4-Dinitrotoluene	58	10	100.0	0	57.7	40.8	113	3.61	25.3	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**lcsd-15398**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSS02**	Batch ID:	**15398**	RunNo:	**21328**					
Prep Date:	**9/19/2014**	Analysis Date:	**9/19/2014**	SeqNo:	**622453**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.1	51.2	111	2.10	23.6	
4-Nitrophenol	110	10	200.0	0	54.2	15.7	86.9	4.68	34.7	
Pentachlorophenol	110	20	200.0	0	56.7	21.6	104	11.9	32.8	
Phenol	140	10	200.0	0	68.0	28.6	71.7	1.72	25.5	
Pyrene	68	10	100.0	0	68.2	54.2	128	1.02	31.4	
1,2,4-Trichlorobenzene	63	10	100.0	0	63.0	40.9	101	1.37	25.9	
Surr: 2-Fluorophenol	140		200.0		67.9	12.1	85.8	0	0	
Surr: Phenol-d5	120		200.0		61.1	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		68.6	26	138	0	0	
Surr: Nitrobenzene-d5	72		100.0		72.1	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	67		100.0		67.1	48.1	106	0	0	
Surr: 4-Terphenyl-d14	75		100.0		75.3	44	113	0	0	

Qualifiers:

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

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: **1409800** RcptNo: **1**

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 7:50:39 AM** AG

Reviewed By: AG 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☑	No ☐	Not Present ☐
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	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: 1 (<2 or >12 unless noted)

Adjusted? No

Checked by: mg

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2014 ~~RP~~ 09/17/14

~~2041~~ ANNUAL GW

Project #:

SMW-2,-4

Project Manager:

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

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409800	Analysis Request: 8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide	Air Bubbles (Y or N)
9/11/14	1510	H_2O	SMW-2			-001	X	X	X	X	X	X	X	
9/11/14	1640	H_2O	SMW-4			-002	X	X	X	X	X	X	X	
			Trip Blank			-004 ~~-003~~	X	X						
			09/17/14			WWS 9/18/14								
9/11/14	1625	H_2O	FB-Group 37-9/11/14			-003	X							

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9-16-14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1703		Alicia Sosa	09/16/14	1703

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

September 30, 2014

Cheryl Johnson

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

RE: 2014 Annual GW OrderNo.: 1409452

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/10/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **BCN**	
Diesel Range Organics (DRO)	2.4	1.0		mg/L	1	9/11/2014 7:20:55 PM	15239
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/11/2014 7:20:55 PM	15239
Surr: DNOP	99.5	59-141		%REC	1	9/11/2014 7:20:55 PM	15239
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	9/11/2014 11:48:12 AM	R21162
Surr: BFB	92.5	70.9-130		%REC	10	9/11/2014 11:48:12 AM	R21162
EPA METHOD 300.0: ANIONS						Analyst: **LGP**	
Fluoride	54	2.0	*	mg/L	20	9/10/2014 9:34:19 PM	R21137
Chloride	310	10		mg/L	20	9/10/2014 9:34:19 PM	R21137
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	9/10/2014 9:21:55 PM	R21137
Bromide	2.2	0.50		mg/L	5	9/10/2014 9:21:55 PM	R21137
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	9/10/2014 9:21:55 PM	R21137
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	9/10/2014 9:21:55 PM	R21137
Sulfate	1200	25		mg/L	50	9/19/2014 12:11:34 AM	R21321
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JLF**	
Barium	0.087	0.0020		mg/L	1	9/11/2014 2:24:02 PM	R21155
Cadmium	ND	0.0020		mg/L	1	9/11/2014 2:24:02 PM	R21155
Calcium	67	1.0		mg/L	1	9/11/2014 2:24:02 PM	R21155
Chromium	0.018	0.0060		mg/L	1	9/11/2014 2:24:02 PM	R21155
Copper	ND	0.0060		mg/L	1	9/11/2014 2:24:02 PM	R21155
Iron	3.5	0.10	*	mg/L	5	9/11/2014 2:25:49 PM	R21155
Magnesium	17	1.0		mg/L	1	9/11/2014 2:24:02 PM	R21155
Manganese	0.18	0.0020	*	mg/L	1	9/11/2014 2:24:02 PM	R21155
Potassium	53	1.0		mg/L	1	9/11/2014 2:24:02 PM	R21155
Silver	ND	0.0050		mg/L	1	9/11/2014 2:24:02 PM	R21155
Sodium	600	10		mg/L	10	9/11/2014 2:31:23 PM	R21155
Zinc	0.087	0.010		mg/L	1	9/11/2014 2:24:02 PM	R21155
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Barium	0.098	0.0020		mg/L	1	9/12/2014 5:15:10 PM	15250
Cadmium	ND	0.0020		mg/L	1	9/12/2014 5:15:10 PM	15250
Chromium	0.017	0.0060		mg/L	1	9/15/2014 11:12:04 AM	15250
Copper	ND	0.0060		mg/L	1	9/12/2014 5:15:10 PM	15250
Iron	3.7	0.10	*	mg/L	5	9/15/2014 11:14:02 AM	15250
Manganese	0.18	0.0020	*	mg/L	1	9/12/2014 5:15:10 PM	15250
Silver	ND	0.0050		mg/L	1	9/12/2014 5:15:10 PM	15250
Zinc	0.12	0.010		mg/L	1	9/12/2014 5:15:10 PM	15250
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Arsenic	0.011	0.010	*	mg/L	10	9/19/2014 1:32:43 PM	R21332
Lead	ND	0.0010		mg/L	1	9/19/2014 12:27:26 PM	R21332
Selenium	0.022	0.010		mg/L	10	9/19/2014 1:32:43 PM	R21332
Uranium	0.0028	0.0010		mg/L	1	9/19/2014 12:27:26 PM	R21332
200.8 ICPMS METALS:TOTAL						Analyst: **DBD**	
Arsenic	0.014	0.010	*	mg/L	10	9/18/2014 5:47:37 PM	15250
Lead	ND	0.0010		mg/L	1	9/18/2014 5:19:45 PM	15250
Selenium	0.021	0.010		mg/L	10	9/23/2014 1:14:14 PM	15250
Uranium	0.0045	0.0010		mg/L	1	9/18/2014 5:19:45 PM	15250
EPA METHOD 245.1: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	9/15/2014 2:28:52 PM	15279
SM5210B: BOD						Analyst: **SMS**	
Biochemical Oxygen Demand	270	2.0		mg/L	1	9/16/2014 12:03:00 PM	15237
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Acenaphthylene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Aniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Anthracene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Azobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benz(a)anthracene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzoic acid	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzyl alcohol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Butyl benzyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Carbazole	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Chloroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Chlorophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001 **Matrix:** AQUEOUS **Received Date:** 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Chrysene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Di-n-octyl phthalate	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Dibenzofuran	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Diethyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Dimethyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dichlorophenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dinitrophenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Fluoranthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Fluorene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachloroethane	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Isophorone	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Methylphenol	22	20		µg/L	1	9/15/2014 4:06:27 PM	15274
3+4-Methylphenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Naphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
3-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Nitrobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
4-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Pentachlorophenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
Phenanthrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Phenol	140	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Pyrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Pyridine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Surr: 2-Fluorophenol	42.3	12.1-85.8		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: Phenol-d5	31.0	17.7-65.8		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: 2,4,6-Tribromophenol	65.6	26-138		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: Nitrobenzene-d5	60.2	47.5-119		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: 2-Fluorobiphenyl	60.6	48.1-106		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: 4-Terphenyl-d14	73.9	44-113		%REC	1	9/15/2014 4:06:27 PM	15274
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	18	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Toluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Ethylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Naphthalene	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1-Methylnaphthalene	ND	8.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2-Methylnaphthalene	ND	8.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Acetone	1300	200		µg/L	20	9/18/2014 10:48:06 AM	R21306
Bromobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Bromodichloromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Bromoform	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Bromomethane	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2-Butanone	160	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Carbon disulfide	58	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Carbon Tetrachloride	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chloroethane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chloroform	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chloromethane	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001 **Matrix:** AQUEOUS **Received Date:** 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
2-Chlorotoluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
4-Chlorotoluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
cis-1,2-DCE	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Dibromochloromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Dibromomethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,3-Dichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,4-Dichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Dichlorodifluoromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1-Dichloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1-Dichloroethene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dichloropropane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,3-Dichloropropane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2,2-Dichloropropane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1-Dichloropropene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Hexachlorobutadiene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2-Hexanone	ND	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Isopropylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
4-Isopropyltoluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
4-Methyl-2-pentanone	ND	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Methylene Chloride	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
n-Butylbenzene	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
n-Propylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
sec-Butylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Styrene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
tert-Butylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
trans-1,2-DCE	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,1-Trichloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,2-Trichloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Trichloroethene (TCE)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Trichlorofluoromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2,3-Trichloropropane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Vinyl chloride	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Xylenes, Total	ND	3.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
Surr: 4-Bromofluorobenzene	106	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
Surr: Dibromofluoromethane	78.9	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
Surr: Toluene-d8	97.5	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	2590	200	*	mg/L	1	9/15/2014 10:27:00 AM	15240

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 13
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:30:00 AM
Lab ID: 1409452-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Toluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Naphthalene	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Acetone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromoform	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromomethane	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Butanone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Carbon disulfide	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chloroethane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chloroform	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chloromethane	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 13
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:30:00 AM
Lab ID: 1409452-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Hexanone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
4-Isopropyltoluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Styrene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/16/2014 10:25:33 PM	R21241
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241
Surr: 4-Bromofluorobenzene	93.5	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241
Surr: Dibromofluoromethane	82.2	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241
Surr: Toluene-d8	95.4	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241

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

Qualifiers:

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

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L721313-01

Date Received : September 12, 2014
Description :

Site ID :

Sample ID : 1409452-002I SPT-1 TO EP-2

Project # :

Collected By :
Collection Date : 09/10/14 08:23

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1500	100	mg/l	410.4	09/19/14	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 09/19/14 15:34 Printed: 09/19/14 15:35

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L721313

September 19, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG743680	09/19/14 13:26

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	17.0	17.0	0.0	5	L721299-01	WG743680
COD	mg/l	13.0	13.0	0.0	5	L721299-10	WG743680

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	175.	95.6	90-110	WG743680

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	179.	175.	98.0	90-110	2.26	5	WG743680

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	405.	12.0	400	98.0	90-110	L721299-02	WG743680

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	415.	405.	101.	90-110	2.44	5	L721299-02	WG743680

Batch number /Run number / Sample number cross reference

WG743680: R2991182: L721313-01

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21155**	RunNo: **21155**
Prep Date:	Analysis Date: **9/11/2014**	SeqNo: **615741** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21155**	RunNo: **21155**
Prep Date:	Analysis Date: **9/11/2014**	SeqNo: **615742** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Calcium	47	1.0	50.00	0	94.0	85	115			
Chromium	0.47	0.0060	0.5000	0	94.7	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.47	0.020	0.5000	0	94.5	85	115			
Magnesium	47	1.0	50.00	0	94.2	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	45	1.0	50.00	0	90.5	85	115			
Silver	0.49	0.0050	0.5000	0	98.2	85	115			
Sodium	46	1.0	50.00	0	92.6	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15250**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**15250**	RunNo:	**21179**					
Prep Date:	**9/12/2014**	Analysis Date:	**9/12/2014**	SeqNo:	**616404**	Units:	**mg/L**			

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

Sample ID	**LCS-15250**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**15250**	RunNo:	**21179**					
Prep Date:	**9/12/2014**	Analysis Date:	**9/12/2014**	SeqNo:	**616405**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.48	0.0050	0.5000	0	96.9	85	115			
Zinc	0.52	0.010	0.5000	0	105	85	115			

Sample ID	**MB-15250**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**15250**	RunNo:	**21196**					
Prep Date:	**9/12/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617274**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LCS-15250**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**15250**	RunNo:	**21196**					
Prep Date:	**9/12/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617275**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	105	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21332**	RunNo: **21332**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622621** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.3	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21332**	RunNo: **21332**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.2	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21332**	RunNo: **21332**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622623** Units: **mg/L**

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

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21332**	RunNo: **21332**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622624** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LLLCS-15250**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**15250**		RunNo:	**21206**				
Prep Date:	**9/12/2014**	Analysis Date:	**9/15/2014**		SeqNo:	**617630**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.1	85	115			
Lead	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15279**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**15279**	RunNo:	**21205**					
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617635**	Units:	**mg/L**			

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

Sample ID	**LCS-15279**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**15279**	RunNo:	**21205**					
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617636**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0055	0.00020	0.005000	0	109	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R21137**	RunNo: **21137**
Prep Date:	Analysis Date: **9/10/2014**	SeqNo: **615456** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R21137**	RunNo: **21137**
Prep Date:	Analysis Date: **9/10/2014**	SeqNo: **615457** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Chloride	4.7	0.50	5.000	0	94.1	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Bromide	2.5	0.10	2.500	0	99.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.7	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R21321**	RunNo: **21321**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R21321**	RunNo: **21321**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.6	0.50	10.00	0	96.2	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB-15239**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW**	Batch ID: **15239**	RunNo: **21142**
Prep Date: **9/11/2014**	Analysis Date: **9/11/2014**	SeqNo: **616131** 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	0.93		1.000		93.4	59	141			

Sample ID **LCS-15239**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW**	Batch ID: **15239**	RunNo: **21142**
Prep Date: **9/11/2014**	Analysis Date: **9/11/2014**	SeqNo: **616132** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	69.7	142			
Surr: DNOP	0.49		0.5000		97.7	59	141			

Sample ID **1409452-001DMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **STP-1 to EP-2**	Batch ID: **15239**	RunNo: **21142**
Prep Date: **9/11/2014**	Analysis Date: **9/11/2014**	SeqNo: **616150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.5	1.0	5.000	2.450	121	55	159			
Surr: DNOP	0.51		0.5000		103	59	141			

Sample ID **1409452-001DMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **STP-1 to EP-2**	Batch ID: **15239**	RunNo: **21142**
Prep Date: **9/11/2014**	Analysis Date: **9/11/2014**	SeqNo: **616151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	9.3	1.0	5.000	2.450	136	55	159	8.48	20	
Surr: DNOP	0.52		0.5000		104	59	141	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R21162**	RunNo:	**21162**					
Prep Date:		Analysis Date:	**9/11/2014**	SeqNo:	**616044**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		82.7	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R21162**	RunNo:	**21162**					
Prep Date:		Analysis Date:	**9/11/2014**	SeqNo:	**616045**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.2	80	120			
Surr: BFB	19		20.00		94.2	70.9	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619016** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619016** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.0	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619018** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.4	70	130			
Toluene	22	1.0	20.00	0	112	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619018** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21270**	RunNo: **21270**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620438** 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								
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								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21270**	RunNo: **21270**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620438** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.3	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21270**	RunNo: **21270**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620438** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.5		10.00		84.5	70	130			
Surr: Toluene-d8	9.2		10.00		92.2	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21270**	RunNo: **21270**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620440** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.0	70	130			
Toluene	23	1.0	20.00	0	116	80	120			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	82.6	131			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.2	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **b7**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21306**	RunNo: **21306**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621784** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acetone	ND	10								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.6	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.4	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.8	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21306**	RunNo: **21306**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621786** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.8	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.4	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.0	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **mb-15274**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **15274**	RunNo: **21200**
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **mb-15274**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **15274**	RunNo: **21200**
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	100		200.0		50.8	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.0	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		65.9	26	138			
Surr: Nitrobenzene-d5	70		100.0		69.7	47.5	119			
Surr: 2-Fluorobiphenyl	66		100.0		65.5	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		73.2	44	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **lcs-15274**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **15274**	RunNo: **21200**
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.2	50.3	109			
4-Chloro-3-methylphenol	140	10	200.0	0	69.5	51.2	113			
2-Chlorophenol	130	10	200.0	0	66.8	48.5	104			
1,4-Dichlorobenzene	52	10	100.0	0	52.0	39.5	106			
2,4-Dinitrotoluene	54	10	100.0	0	54.5	45.4	107			
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.8	50.4	119			
4-Nitrophenol	66	10	200.0	0	33.0	15.5	62.2			
Pentachlorophenol	100	20	200.0	0	50.1	23.5	93.5			
Phenol	80	10	200.0	0	40.0	26.8	65.6			
Pyrene	71	10	100.0	0	70.7	54.4	108			
1,2,4-Trichlorobenzene	55	10	100.0	0	54.7	39.9	106			
Surr: 2-Fluorophenol	100		200.0		50.2	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		74.4	26	138			
Surr: Nitrobenzene-d5	68		100.0		67.9	47.5	119			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	48.1	106			
Surr: 4-Terphenyl-d14	82		100.0		82.5	44	113			

Sample ID **lcsd-15274**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **15274**	RunNo: **21200**
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617972** Units: **µg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**lcsd-15274**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSS02**	Batch ID:	**15274**	RunNo:	**21200**					
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617972**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	79		100.0		79.4	44	113	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15237**	SampType:	**MBLK**	TestCode:	**SM5210B: BOD**					
Client ID:	**PBW**	Batch ID:	**15237**	RunNo:	**21252**					
Prep Date:	**9/11/2014**	Analysis Date:	**9/16/2014**	SeqNo:	**619535**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**MB--15237**	SampType:	**MBLK**	TestCode:	**SM5210B: BOD**					
Client ID:	**PBW**	Batch ID:	**15237**	RunNo:	**21252**					
Prep Date:	**9/11/2014**	Analysis Date:	**9/16/2014**	SeqNo:	**619536**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**LCS-15237**	SampType:	**LCS**	TestCode:	**SM5210B: BOD**					
Client ID:	**LCSW**	Batch ID:	**15237**	RunNo:	**21252**					
Prep Date:	**9/11/2014**	Analysis Date:	**9/16/2014**	SeqNo:	**619537**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	116	77.5	136			

Sample ID	**LCSD-15237**	SampType:	**LCSD**	TestCode:	**SM5210B: BOD**					
Client ID:	**LCSS02**	Batch ID:	**15237**	RunNo:	**21252**					
Prep Date:	**9/11/2014**	Analysis Date:	**9/16/2014**	SeqNo:	**619538**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	210	2.0	198.0	0	107	77.5	136	8.84	35.5	

Sample ID	**1409452-001ADUP**	SampType:	**DUP**	TestCode:	**SM5210B: BOD**					
Client ID:	**STP-1 to EP-2**	Batch ID:	**15237**	RunNo:	**21252**					
Prep Date:	**9/11/2014**	Analysis Date:	**9/16/2014**	SeqNo:	**619540**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	270	2.0						1.20	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**

30-Sep-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15240**	SampType:	**MBLK**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**PBW**	Batch ID:	**15240**	RunNo:	**21194**					
Prep Date:	**9/11/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617174**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-15240**	SampType:	**LCS**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**LCSW**	Batch ID:	**15240**	RunNo:	**21194**					
Prep Date:	**9/11/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617175**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1409452 RcptNo: 1

Received by/date: MG 09/10/14

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

Completed By: **Lindsay Mangin** 9/10/2014 12:05:51 PM

Reviewed By: MG 09/10/14 @ 1321

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 ☑	CS 09/10/14
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: 4
(<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

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

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

17. Additional remarks: For metals analysis: Added 1ml HNO_3 to ~0016 for an acceptable pH Held in login for 24 hours. - CS 09/10/14

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2014 ANNUAL GW

Project #:

STP-1 to EP-2

Project Manager:

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

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409452	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved, filtered	Major cations/anions	BOD	COD	TDS						Air Bubbles (Y or N)
9/10/14	0823	H_2O	STP-1 to EP-2	VARIOUS	VARIOUS	-001	X	X	X	X	X	X	X	X	X						
9/10/14	0830	H_2O	FB-Group 13	VOA x 2	HCl	-002	X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/10/14	0946	[signature]	Holly Walker [signature]	9/10/14	0946
9/10/14	1200	Holly Walker [signature]	[signature]	09/10/14	1200

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 04, 2014

Cheryl Johnson

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

RE: Q4 2014 OrderNo.: 1411471

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/12/2014 for the analyses presented in the following report.

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

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

Case Narrative

WO#: **1411471**
Date: **12/4/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Q4 2014

Analytical Comments Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:30:00 AM
Lab ID: 1411471-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Barium	0.068	0.0020		mg/L	1	11/16/2014 8:19:57 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 8:19:57 PM	R22599
Chromium	0.014	0.0060		mg/L	1	11/16/2014 8:19:57 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 8:19:57 PM	R22599
Iron	1.4	0.10	*	mg/L	5	11/16/2014 8:21:46 PM	R22599
Manganese	0.17	0.0020	*	mg/L	1	11/16/2014 8:19:57 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 8:19:57 PM	R22599
Zinc	0.072	0.010		mg/L	1	11/16/2014 8:19:57 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Barium	0.071	0.0020		mg/L	1	11/18/2014 3:34:27 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:34:27 PM	16416
Chromium	0.013	0.0060		mg/L	1	11/18/2014 3:34:27 PM	16416
Copper	0.0066	0.0060		mg/L	1	11/18/2014 3:34:27 PM	16416
Iron	1.6	0.10	*	mg/L	5	11/18/2014 3:36:18 PM	16416
Manganese	0.18	0.0020	*	mg/L	1	11/18/2014 3:34:27 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:34:27 PM	16416
Zinc	0.044	0.010		mg/L	1	11/20/2014 3:59:21 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Arsenic	0.010	0.0010	*	mg/L	1	11/24/2014 5:29:37 PM	R22774
Lead	ND	0.0010		mg/L	1	11/24/2014 5:29:37 PM	R22774
Selenium	ND	0.025		mg/L	1	11/24/2014 5:29:37 PM	R22774
Uranium	0.0013	0.0010		mg/L	1	11/24/2014 5:29:37 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst: **DBD**	
Arsenic	0.011	0.010	*	mg/L	10	11/26/2014 5:59:53 PM	16416
Lead	ND	0.0010		mg/L	1	11/18/2014 2:31:32 PM	16416
Selenium	0.025	0.010		mg/L	10	11/26/2014 5:59:53 PM	16416
Uranium	0.0022	0.0010		mg/L	1	11/18/2014 2:31:32 PM	16416
EPA METHOD 245.1: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	11/21/2014 3:02:34 PM	16511
SM5210B: BOD						Analyst: **SMS**	
Biochemical Oxygen Demand	630	2.0		mg/L	1	11/18/2014 2:28:00 PM	16371

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW to EP-2
Project: Q4 2014
Collection Date: 11/12/2014 8:47:00 AM
Lab ID: 1411471-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGP**	
Fluoride	ND	0.10		mg/L	1	11/13/2014 12:10:35 PM	R22546
Chloride	4100	250		mg/L	500	11/24/2014 10:48:44 PM	R22776
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	11/13/2014 12:47:49 PM	R22546
Bromide	0.15	0.10		mg/L	1	11/13/2014 12:10:35 PM	R22546
Nitrogen, Nitrate (As N)	0.78	0.10		mg/L	1	11/13/2014 12:10:35 PM	R22546
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/13/2014 12:10:35 PM	R22546
Sulfate	990	250		mg/L	500	11/24/2014 10:48:44 PM	R22776
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Calcium	19	1.0		mg/L	1	11/16/2014 8:31:07 PM	R22599
Magnesium	5.1	1.0		mg/L	1	11/16/2014 8:31:07 PM	R22599
Potassium	7.5	1.0		mg/L	1	11/16/2014 8:31:07 PM	R22599
Sodium	680	10		mg/L	10	11/24/2014 12:08:28 PM	R22752

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

Qualifiers:

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

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733761-01

Date Received : November 14, 2014
Description :

Site ID :

Sample ID : 1411471-001D STP-1 TO EP-2

Project # :

Collected By :
Collection Date : 11/12/14 10:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1300	50.	mg/l	410.4	11/19/14	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 11/19/14 15:37 Printed: 11/19/14 15:37

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L733761

November 19, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG755289	11/19/14 12:12

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	410.	410.	0.0	5	L733939-08	WG755289
COD	mg/l	9600	9600	0.0	5	L733485-01	WG755289

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	189.	103.	90-110	WG755289

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	189.	189.	103.	90-110	0.0	5	WG755289

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	699.	260.	400	110.	90-110	L733812-01	WG755289

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	700.	699.	110.	90-110	0.143	5	L733812-01	WG755289

Batch number /Run number / Sample number cross reference

WG755289: R3005377: L733761-01

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R22599**	RunNo: **22599**
Prep Date:	Analysis Date: **11/16/2014**	SeqNo: **666147** Units: **mg/L**

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

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R22599**	RunNo: **22599**
Prep Date:	Analysis Date: **11/16/2014**	SeqNo: **666149** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R22599**	RunNo: **22599**
Prep Date:	Analysis Date: **11/16/2014**	SeqNo: **666151** 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	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	45	1.0	50.00	0	90.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R22599**	RunNo: **22599**
Prep Date:	Analysis Date: **11/16/2014**	SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	45	1.0	50.00	0	89.1	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Potassium	43	1.0	50.00	0	86.4	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R22599**	RunNo: **22599**
Prep Date:	Analysis Date: **11/16/2014**	SeqNo: **666152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0	109	85	115			
Cadmium	0.55	0.0020	0.5000	0	110	85	115			
Calcium	56	1.0	50.00	0	113	85	115			
Chromium	0.54	0.0060	0.5000	0	108	85	115			
Copper	0.55	0.0060	0.5000	0	109	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Magnesium	56	1.0	50.00	0	112	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			
Potassium	54	1.0	50.00	0	109	85	115			
Silver	0.12	0.0050	0.1000	0	117	85	115			S
Zinc	0.54	0.010	0.5000	0	109	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R22752**	RunNo: **22752**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671318** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R22752**	RunNo: **22752**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671319** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R22752**	RunNo: **22752**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R22752**	RunNo: **22752**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.6	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID	**MB-16416**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**16416**	RunNo:	**22614**					
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666852**	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-16416**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**16416**	RunNo:	**22614**					
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666853**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R22774**	RunNo: **22774**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	89.7	85	115			
Uranium	0.024	0.0010	0.02500	0	95.2	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R22774**	RunNo: **22774**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.024	0.0010	0.02500	0	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	95.2	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R22774**	RunNo: **22774**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672124** Units: **mg/L**

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

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R22774**	RunNo: **22774**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672125** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID	**LLLCS-16416**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**16416**		RunNo:	**22609**				
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**		SeqNo:	**666765**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.026	0.0010	0.02500	0	106	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.026	0.0010	0.02500	0	106	85	115			

Sample ID	**MB-16416**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**PBW**	Batch ID:	**16416**		RunNo:	**22609**				
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**		SeqNo:	**666767**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	**1411471-001BLLMS**	SampType:	**MSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**STP-1 to EP-2**	Batch ID:	**16416**		RunNo:	**22609**				
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**		SeqNo:	**667250**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.028	0.0010	0.02500	0	113	70	130			
Uranium	0.034	0.0010	0.02500	0.002219	126	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID	**MB-16511**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**16511**	RunNo:	**22710**					
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669836**	Units:	**mg/L**			

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

Sample ID	**LCS-16511**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**16511**	RunNo:	**22710**					
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669837**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R22546**	RunNo: **22546**
Prep Date:	Analysis Date: **11/13/2014**	SeqNo: **664770** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
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								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R22546**	RunNo: **22546**
Prep Date:	Analysis Date: **11/13/2014**	SeqNo: **664771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.9	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.4	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.0	90	110			

Sample ID **1411471-002AMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BW to EP-2**	Batch ID: **R22546**	RunNo: **22546**
Prep Date:	Analysis Date: **11/13/2014**	SeqNo: **664777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	1.6	0.10	2.500	0.1480	57.2	82.5	103			S
Nitrogen, Nitrate (As N)	3.1	0.10	2.500	0.7802	93.1	84	109			
Phosphorus, Orthophosphate (As P	2.0	0.50	5.000	0	39.0	69	109			S

Sample ID **1411471-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BW to EP-2**	Batch ID: **R22546**	RunNo: **22546**
Prep Date:	Analysis Date: **11/13/2014**	SeqNo: **664778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	1.5	0.10	2.500	0.1480	56.0	82.5	103	2.00	20	S
Nitrogen, Nitrate (As N)	2.9	0.10	2.500	0.7802	85.7	84	109	6.16	20	
Phosphorus, Orthophosphate (As P	2.1	0.50	5.000	0	41.3	69	109	5.82	20	S

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R22776**	RunNo: **22776**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672163** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R22776**	RunNo: **22776**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672163** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R22776**	RunNo: **22776**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672164** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.5	90	110			
Sulfate	9.6	0.50	10.00	0	95.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**

04-Dec-14

Client: Western Refining Southwest, Gallup

Project: Q4 2014

Sample ID	**MB-16371**	SampType:	**MBLK**		TestCode:	**SM5210B: BOD**				
Client ID:	**PBW**	Batch ID:	**16371**		RunNo:	**22705**				
Prep Date:	**11/13/2014**	Analysis Date:	**11/18/2014**		SeqNo:	**669659**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**MB--16371**	SampType:	**MBLK**		TestCode:	**SM5210B: BOD**				
Client ID:	**PBW**	Batch ID:	**16371**		RunNo:	**22705**				
Prep Date:	**11/13/2014**	Analysis Date:	**11/18/2014**		SeqNo:	**669660**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**LCS-16371**	SampType:	**LCS**		TestCode:	**SM5210B: BOD**				
Client ID:	**LCSW**	Batch ID:	**16371**		RunNo:	**22705**				
Prep Date:	**11/13/2014**	Analysis Date:	**11/18/2014**		SeqNo:	**669661**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	200	2.0	198.0	0	100	89.6	126			

Sample ID	**LCSD-16371**	SampType:	**LCSD**		TestCode:	**SM5210B: BOD**				
Client ID:	**LCSS02**	Batch ID:	**16371**		RunNo:	**22705**				
Prep Date:	**11/13/2014**	Analysis Date:	**11/18/2014**		SeqNo:	**669662**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	220	2.0	198.0	0	111	89.6	126	10.3	31.9	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1411471 RcptNo: 1

Received by/date: AG 11/12/14

Logged By: **Ashley Gallegos** 11/12/2014 4:12:00 PM

Completed By: **Ashley Gallegos** 11/13/2014 8:43:03 AM

Reviewed By: 11/13/14 0935

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: 6 (<2 or >12 unless noted)

Adjusted? NO

Checked by: CS

Special Handling (if applicable)

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

Person Notified:	Cheryl Johnson	Date:	11/13/2014
By Whom:	Anne Thorne	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	E Coli Sample was rejected		
Client Instructions:	See Section 19.		

17. Additional remarks:

E. Coli Sample for -001 was rejected, sample was too dark even after dilution per Stephanie

18. **Cooler Information**

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

Chain-of-Custody Record

Client: Western Refining Company	Turn-Around Time: X Standard ☐ Rush
GALLUP REFINERY	Project Name: Q4 2014
Mailing Address: ? Giant Crossing Road, Gallup, NM 87301	Project #: STP-1 to EP-2
Phone #: 505-722-3833	Project Manager: C. JOHNSON (cheryl.johnson@wnr.com)
email or Fax#: 505-863-0930	Sampler:
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)	On Ice: ☒ Yes ☐ No
Accreditation: ☐ NELAP ☐ Other	Sample Temperature: 1.0
☐ EDD (Type)	

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. 1411471	BOD / COD	metals (T+D)	8260B	Cation / Anion	*SEE Email 11/13/14	Air Bubbles (Y or N)
11-12-14	1030	Aq	STP-1 to EP-2	4		-001	X	X				
11-12-14	847		BW to EP-2	4		-002	X	X		X		
11-12-14	—		~~TB-103~~	3		-003			X			

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
11-12-14	1340	Pam Landers		11-12-14	1:00	
Date:	Time:	Relinquished by:	Received by:	Date	Time	
11-12-14	1612			11/12/14	1612	

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

July 09, 2014

Cheryl Johnson

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

RE: 2014 2nd Quarter OrderNo.: 1406811

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/17/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **BCN**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/19/2014 4:31:24 AM	13766
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/19/2014 4:31:24 AM	13766
Surr: DNOP	101	62.7-145		%REC	1	6/19/2014 4:31:24 AM	13766
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/19/2014 2:24:00 PM	R19392
Surr: BFB	116	70.9-130		%REC	1	6/19/2014 2:24:00 PM	R19392
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	0.85	0.10		mg/L	1	6/18/2014 11:23:48 AM	R19384
Chloride	1000	50	*	mg/L	100	6/24/2014 2:00:15 AM	R19470
Bromide	2.2	0.10		mg/L	1	6/18/2014 11:23:48 AM	R19384
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/18/2014 11:23:48 AM	R19384
Sulfate	160	10		mg/L	20	6/18/2014 12:01:02 PM	R19384
Nitrate+Nitrite as N	15	1.0	*	mg/L	5	6/19/2014 5:23:33 AM	R19384
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JLF**	
Barium	0.083	0.0020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Cadmium	ND	0.0020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Calcium	35	1.0		mg/L	1	6/27/2014 3:32:35 PM	R19563
Chromium	ND	0.0060		mg/L	1	6/27/2014 3:32:35 PM	R19563
Copper	ND	0.0060		mg/L	1	6/27/2014 3:32:35 PM	R19563
Iron	0.047	0.020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Magnesium	4.8	1.0		mg/L	1	6/27/2014 3:32:35 PM	R19563
Manganese	0.040	0.0020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Potassium	10	1.0		mg/L	1	6/27/2014 3:32:35 PM	R19563
Silver	ND	0.0050		mg/L	1	7/1/2014 5:44:01 PM	R19605
Sodium	750	20		mg/L	20	7/2/2014 3:58:30 PM	R19650
Zinc	0.33	0.010		mg/L	1	6/27/2014 3:32:35 PM	R19563
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Barium	0.11	0.0020		mg/L	1	6/27/2014 1:08:56 PM	13879
Cadmium	ND	0.0020		mg/L	1	6/27/2014 1:08:56 PM	13879
Calcium	41	1.0		mg/L	1	6/27/2014 1:08:56 PM	13879
Chromium	ND	0.0060		mg/L	1	6/27/2014 1:08:56 PM	13879
Copper	ND	0.0060		mg/L	1	6/27/2014 1:08:56 PM	13879
Iron	0.42	0.020	*	mg/L	1	6/27/2014 1:08:56 PM	13879
Magnesium	5.4	1.0		mg/L	1	6/27/2014 1:08:56 PM	13879
Manganese	0.055	0.0020	*	mg/L	1	6/27/2014 1:08:56 PM	13879
Potassium	9.0	1.0		mg/L	1	6/27/2014 1:08:56 PM	13879
Silver	ND	0.0050		mg/L	1	6/27/2014 1:08:56 PM	13879

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Sodium	890	50		mg/L	50	6/30/2014 4:39:56 PM	13879
Zinc	0.26	0.010		mg/L	1	6/27/2014 1:08:56 PM	13879
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Arsenic	ND	0.010		mg/L	10	7/2/2014 5:59:40 PM	R19649
Lead	ND	0.010		mg/L	10	7/2/2014 5:59:40 PM	R19649
Selenium	0.022	0.010		mg/L	10	7/2/2014 5:59:40 PM	R19649
Uranium	0.077	0.010	*	mg/L	10	7/2/2014 5:59:40 PM	R19649
200.8 ICPMS METALS:TOTAL						Analyst: **DBD**	
Arsenic	ND	0.010		mg/L	10	7/2/2014 2:37:22 PM	13879
Lead	ND	0.010		mg/L	10	7/2/2014 2:37:22 PM	13879
Selenium	0.028	0.010		mg/L	10	7/2/2014 2:37:22 PM	13879
Uranium	0.065	0.010	*	mg/L	10	7/2/2014 2:37:22 PM	13879
EPA METHOD 245.1: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	6/27/2014 2:53:26 PM	13930
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Acenaphthylene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Aniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Anthracene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Azobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benz(a)anthracene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(a)pyrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(b)fluoranthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(k)fluoranthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzoic acid	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzyl alcohol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Butyl benzyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Carbazole	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Chloroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Chloronaphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Chlorophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Chrysene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Di-n-butyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Di-n-octyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Dibenzofuran	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,2-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,3-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,4-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Diethyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Dimethyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dichlorophenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dimethylphenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dinitrophenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,6-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Fluoranthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Fluorene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachlorobutadiene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachloroethane	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Isophorone	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Methylphenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
3+4-Methylphenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
N-Nitrosodimethylamine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Naphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Nitroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
3-Nitroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Nitroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Nitrobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Nitrophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Nitrophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Pentachlorophenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
Phenanthrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Phenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Pyrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Pyridine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Surr: 2-Fluorophenol	52.6	12.1-85.8		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: Phenol-d5	41.0	17.7-65.8		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: 2,4,6-Tribromophenol	61.6	26-138		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: Nitrobenzene-d5	81.3	47.5-119		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: 2-Fluorobiphenyl	78.5	48.1-106		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: 4-Terphenyl-d14	76.5	44-113		%REC	1	6/19/2014 5:32:28 PM	13776
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Toluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Ethylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Methyl tert-butyl ether (MTBE)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,4-Trimethylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,3,5-Trimethylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dichloroethane (EDC)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dibromoethane (EDB)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Naphthalene	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1-Methylnaphthalene	ND	4.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Methylnaphthalene	ND	4.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Acetone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromodichloromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromoform	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromomethane	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Butanone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Carbon disulfide	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Carbon Tetrachloride	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Chlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Chloroethane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Chloroform	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Chloromethane	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Chlorotoluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
4-Chlorotoluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
cis-1,2-DCE	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
cis-1,3-Dichloropropene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dibromo-3-chloropropane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Dibromochloromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Dibromomethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,3-Dichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,4-Dichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Dichlorodifluoromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1-Dichloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1-Dichloroethene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dichloropropane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,3-Dichloropropane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2,2-Dichloropropane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1-Dichloropropene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Hexachlorobutadiene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Hexanone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Isopropylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
4-Isopropyltoluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
4-Methyl-2-pentanone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Methylene Chloride	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
n-Butylbenzene	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
n-Propylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
sec-Butylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Styrene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
tert-Butylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,1,2-Tetrachloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,2,2-Tetrachloroethane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Tetrachloroethene (PCE)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
trans-1,2-DCE	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
trans-1,3-Dichloropropene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,3-Trichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,4-Trichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,1-Trichloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,2-Trichloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Trichloroethene (TCE)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Trichlorofluoromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,3-Trichloropropane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Vinyl chloride	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Xylenes, Total	ND	1.5	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Surr: 1,2-Dichloroethane-d4	104	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361
Surr: 4-Bromofluorobenzene	103	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361
Surr: Dibromofluoromethane	118	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361
Surr: Toluene-d8	100	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Fluoride	0.61	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Chloride	98	10		mg/L	20	6/18/2014 11:11:24 AM	R19384
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Bromide	0.26	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	6/18/2014 10:58:59 AM	R19384
Sulfate	60	10		mg/L	20	6/18/2014 11:11:24 AM	R19384
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JLF**	
Barium	0.24	0.0020		mg/L	1	6/27/2014 3:46:43 PM	R19563
Cadmium	ND	0.0020		mg/L	1	6/27/2014 3:46:43 PM	R19563
Calcium	89	1.0		mg/L	1	6/27/2014 3:46:43 PM	R19563
Chromium	ND	0.0060		mg/L	1	6/27/2014 3:46:43 PM	R19563
Copper	ND	0.0060		mg/L	1	6/27/2014 3:46:43 PM	R19563
Iron	0.94	0.020	*	mg/L	1	6/27/2014 3:46:43 PM	R19563
Magnesium	17	1.0		mg/L	1	6/27/2014 3:46:43 PM	R19563
Manganese	3.3	0.010	*	mg/L	5	6/27/2014 3:48:28 PM	R19563
Potassium	2.6	1.0		mg/L	1	6/27/2014 3:46:43 PM	R19563
Silver	ND	0.0050		mg/L	1	7/1/2014 5:51:50 PM	R19605
Sodium	240	5.0		mg/L	5	7/2/2014 4:00:12 PM	R19650
Zinc	0.14	0.010		mg/L	1	6/27/2014 3:46:43 PM	R19563
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Barium	0.61	0.0020		mg/L	1	6/27/2014 1:12:49 PM	13879
Cadmium	ND	0.0020		mg/L	1	6/27/2014 1:12:49 PM	13879
Calcium	140	5.0		mg/L	5	6/27/2014 1:14:37 PM	13879
Chromium	0.013	0.0060		mg/L	1	6/27/2014 1:12:49 PM	13879
Copper	0.012	0.0060		mg/L	1	6/27/2014 1:12:49 PM	13879
Iron	10	1.0	*	mg/L	50	6/27/2014 1:18:00 PM	13879
Magnesium	27	1.0		mg/L	1	6/27/2014 1:12:49 PM	13879
Manganese	4.1	0.010	*	mg/L	5	6/27/2014 1:14:37 PM	13879
Potassium	4.3	1.0		mg/L	1	6/27/2014 1:12:49 PM	13879
Silver	ND	0.0050		mg/L	1	6/27/2014 1:12:49 PM	13879
Sodium	240	5.0		mg/L	5	6/30/2014 4:41:37 PM	13879
Zinc	0.036	0.010		mg/L	1	6/27/2014 1:12:49 PM	13879
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Arsenic	0.0054	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649
Lead	ND	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649
Selenium	ND	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649
Uranium	0.022	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **DBD**	
Arsenic	0.0063	0.0010		mg/L	1	7/2/2014 2:40:25 PM	13879
Lead	0.022	0.0010	*	mg/L	1	7/2/2014 2:40:25 PM	13879
Selenium	0.0045	0.0010		mg/L	1	7/2/2014 2:40:25 PM	13879
Uranium	0.027	0.0010		mg/L	1	7/2/2014 2:40:25 PM	13879
EPA METHOD 245.1: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	6/27/2014 2:58:59 PM	13930
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Acenaphthylene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Aniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Anthracene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Azobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benz(a)anthracene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(a)pyrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(b)fluoranthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(k)fluoranthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzoic acid	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzyl alcohol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Butyl benzyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Carbazole	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Chloroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Chloronaphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Chlorophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Chrysene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Di-n-butyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Di-n-octyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Dibenzofuran	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1,2-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1,3-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Diethyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Dimethyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dichlorophenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dimethylphenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dinitrophenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2,6-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Fluoranthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Fluorene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachlorobutadiene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachloroethane	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Isophorone	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Methylphenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
3+4-Methylphenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
N-Nitrosodimethylamine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Naphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Nitroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
3-Nitroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Nitroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Nitrobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Nitrophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Nitrophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Pentachlorophenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
Phenanthrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Phenol	39	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Pyrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Pyridine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Surr: 2-Fluorophenol	51.0	12.1-85.8		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: Phenol-d5	43.8	17.7-65.8		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: 2,4,6-Tribromophenol	81.0	26-138		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: Nitrobenzene-d5	83.1	47.5-119		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: 2-Fluorobiphenyl	93.1	48.1-106		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: 4-Terphenyl-d14	87.4	44-113		%REC	1	6/19/2014 3:35:02 PM	13776

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:20:00 AM
Lab ID: 1406811-003 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Acenaphthylene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Aniline	11	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Anthracene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Azobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benz(a)anthracene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(a)pyrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(b)fluoranthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(k)fluoranthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzoic acid	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzyl alcohol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Butyl benzyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Carbazole	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Chloroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Chloronaphthalene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Chlorophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Chrysene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Di-n-butyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Di-n-octyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Dibenzofuran	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,2-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,3-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,4-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Diethyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Dimethyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4-Dichlorophenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4-Dimethylphenol	170	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4-Dinitrophenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:20:00 AM
Lab ID: 1406811-003 **Matrix:** AQUEOUS **Received Date:** 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,6-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Fluoranthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Fluorene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachlorobutadiene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachloroethane	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Isophorone	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1-Methylnaphthalene	37	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Methylnaphthalene	42	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Methylphenol	220	20		µg/L	1	6/19/2014 4:04:27 PM	13776
3+4-Methylphenol	160	10		µg/L	1	6/19/2014 4:04:27 PM	13776
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
N-Nitrosodimethylamine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Naphthalene	140	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Nitroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
3-Nitroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Nitroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Nitrobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Nitrophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Nitrophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Pentachlorophenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
Phenanthrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Phenol	420	50		µg/L	5	6/20/2014 10:31:11 AM	13776
Pyrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Pyridine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Surr: 2-Fluorophenol	26.5	12.1-85.8		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: Phenol-d5	48.4	17.7-65.8		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: 2,4,6-Tribromophenol	90.2	26-138		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: Nitrobenzene-d5	88.6	47.5-119		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: 2-Fluorobiphenyl	92.4	48.1-106		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: 4-Terphenyl-d14	87.1	44-113		%REC	1	6/19/2014 4:04:27 PM	13776

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R19563**	RunNo: **19563**
Prep Date:	Analysis Date: **6/27/2014**	SeqNo: **566849** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R19563**	RunNo: **19563**
Prep Date:	Analysis Date: **6/27/2014**	SeqNo: **566850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.3	85	115			
Calcium	49	1.0	50.00	0	97.4	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.47	0.0060	0.5000	0	94.6	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	49	1.0	50.00	0	98.0	85	115			
Manganese	0.50	0.0020	0.5000	0	99.8	85	115			
Potassium	48	1.0	50.00	0	96.4	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Sample ID **1406811-001GMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1NW**	Batch ID: **R19563**	RunNo: **19563**
Prep Date:	Analysis Date: **6/27/2014**	SeqNo: **566938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.54	0.0020	0.5000	0.08342	90.5	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.7	70	130			
Calcium	81	1.0	50.00	35.01	92.5	70	130			
Chromium	0.49	0.0060	0.5000	0.005410	96.3	70	130			
Copper	0.50	0.0060	0.5000	0.002490	98.9	70	130			
Iron	0.53	0.020	0.5000	0.04659	96.1	70	130			
Magnesium	52	1.0	50.00	4.760	93.8	70	130			
Manganese	0.51	0.0020	0.5000	0.04002	94.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID	**1406811-001GMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**STP-1NW**	Batch ID:	**R19563**		RunNo:	**19563**				
Prep Date:		Analysis Date:	**6/27/2014**		SeqNo:	**566938**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	62	1.0	50.00	10.27	103	70	130			
Zinc	0.78	0.010	0.5000	0.3292	89.8	70	130			

Sample ID	**1406811-001GMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**STP-1NW**	Batch ID:	**R19563**		RunNo:	**19563**				
Prep Date:		Analysis Date:	**6/27/2014**		SeqNo:	**566939**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0.08342	89.6	70	130	0.851	20	
Cadmium	0.48	0.0020	0.5000	0	96.5	70	130	1.24	20	
Calcium	81	1.0	50.00	35.01	91.8	70	130	0.464	20	
Chromium	0.49	0.0060	0.5000	0.005410	96.2	70	130	0.0596	20	
Copper	0.49	0.0060	0.5000	0.002490	98.3	70	130	0.599	20	
Iron	0.53	0.020	0.5000	0.04659	96.9	70	130	0.777	20	
Magnesium	52	1.0	50.00	4.760	93.8	70	130	0.0503	20	
Manganese	0.51	0.0020	0.5000	0.04002	93.4	70	130	1.28	20	
Potassium	62	1.0	50.00	10.27	104	70	130	0.641	20	
Zinc	0.77	0.010	0.5000	0.3292	87.5	70	130	1.51	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**R19605**		RunNo:	**19605**				
Prep Date:		Analysis Date:	**7/1/2014**		SeqNo:	**568367**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**R19605**		RunNo:	**19605**				
Prep Date:		Analysis Date:	**7/1/2014**		SeqNo:	**568368**	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	**1406811-001GMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**STP-1NW**	Batch ID:	**R19605**		RunNo:	**19605**				
Prep Date:		Analysis Date:	**7/1/2014**		SeqNo:	**568970**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.090	0.0050	0.1000	0	89.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID	**1406811-001GMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**STP-1NW**	Batch ID:	**R19605**		RunNo:	**19605**				
Prep Date:		Analysis Date:	**7/1/2014**		SeqNo:	**568971**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.089	0.0050	0.1000	0	88.8	70	130	1.08	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**R19650**		RunNo:	**19650**				
Prep Date:		Analysis Date:	**7/2/2014**		SeqNo:	**570374**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**R19650**		RunNo:	**19650**				
Prep Date:		Analysis Date:	**7/2/2014**		SeqNo:	**570375**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	48	1.0	50.00	0	96.7	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID	**MB-13879**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**13879**	RunNo:	**19525**
Prep Date:	**6/25/2014**	Analysis Date:	**6/26/2014**	SeqNo:	**565020** 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-13879**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**13879**	RunNo:	**19525**
Prep Date:	**6/25/2014**	Analysis Date:	**6/26/2014**	SeqNo:	**565021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.6	85	115			
Chromium	0.50	0.0060	0.5000	0	99.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.51	0.010	0.5000	0	101	85	115			

Sample ID	**LCS CAT-13879**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**13879**	RunNo:	**19525**
Prep Date:	**6/25/2014**	Analysis Date:	**6/26/2014**	SeqNo:	**565022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	101	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Potassium	49	1.0	50.00	0	98.6	85	115			
Sodium	50	1.0	50.00	0	99.7	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R19649**	RunNo: **19649**
Prep Date:	Analysis Date: **7/2/2014**	SeqNo: **570332** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.6	85	115			
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.1	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R19649**	RunNo: **19649**
Prep Date:	Analysis Date: **7/2/2014**	SeqNo: **570333** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.4	85	115			
Lead	0.025	0.0010	0.02500	0	98.7	85	115			
Selenium	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R19649**	RunNo: **19649**
Prep Date:	Analysis Date: **7/2/2014**	SeqNo: **570334** Units: **mg/L**

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

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R19649**	RunNo: **19649**
Prep Date:	Analysis Date: **7/2/2014**	SeqNo: **570335** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID	**LLLCS-13879**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**BatchQC**	Batch ID:	**13879**	RunNo:	**19535**
Prep Date:	**6/25/2014**	Analysis Date:	**6/26/2014**	SeqNo:	**565868** 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	95.3	85	115			
Lead	0.025	0.0010	0.02500	0	98.2	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.0	85	115			

Sample ID	**MB-13879**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**PBW**	Batch ID:	**13879**	RunNo:	**19535**
Prep Date:	**6/25/2014**	Analysis Date:	**6/26/2014**	SeqNo:	**565873** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **MB-13930**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**						
Client ID: **PBW**	Batch ID: **13930**			RunNo: **19549**						
Prep Date: **6/27/2014**	Analysis Date: **6/27/2014**			SeqNo: **566235**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R19384**	RunNo: **19384**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **560593** 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								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R19384**	RunNo: **19384**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **560594** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.46	0.10	0.5000	0	91.6	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.0	90	110			
Bromide	2.4	0.10	2.500	0	95.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.5	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.9	90	110			
Sulfate	9.7	0.50	10.00	0	97.2	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.9	90	110			

Sample ID **1406811-001EMS**	SampType: **MS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **STP-1NW**	Batch ID: **R19384**	RunNo: **19384**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **560598** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.3	0.10	0.5000	0.8475	80.7	72.7	110			
Bromide	4.5	0.10	2.500	2.178	92.9	85.1	108			
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0.1927	83.3	81.3	101			H

Sample ID **1406811-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 300.0: Anions**
Client ID: **STP-1NW**	Batch ID: **R19384**	RunNo: **19384**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **560599** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.3	0.10	0.5000	0.8475	81.9	72.7	110	0.510	20	
Bromide	4.5	0.10	2.500	2.178	92.8	85.1	108	0.0301	20	
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0.1927	84.2	81.3	101	1.12	20	H

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R19384**	RunNo: **19384**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **560647** 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								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R19384**	RunNo: **19384**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **560648** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.7	90	110			
Chloride	4.8	0.50	5.000	0	95.2	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.1	90	110			
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.6	90	110			
Sulfate	9.9	0.50	10.00	0	98.5	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R19470**	RunNo: **19470**
Prep Date:	Analysis Date: **6/23/2014**	SeqNo: **563268** 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: **R19470**	RunNo: **19470**
Prep Date:	Analysis Date: **6/23/2014**	SeqNo: **563269** 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	95.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **MB-13766**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW**	Batch ID: **13766**	RunNo: **19341**
Prep Date: **6/18/2014**	Analysis Date: **6/18/2014**	SeqNo: **560186** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	62.7	145			

Sample ID **LCS-13766**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW**	Batch ID: **13766**	RunNo: **19341**
Prep Date: **6/18/2014**	Analysis Date: **6/18/2014**	SeqNo: **560188** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	107	78.6	146			
Surr: DNOP	0.47		0.5000		94.8	62.7	145			

Sample ID **LCSD-13766**	SampType: **LCSD**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02**	Batch ID: **13766**	RunNo: **19341**
Prep Date: **6/18/2014**	Analysis Date: **6/18/2014**	SeqNo: **560189** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.5	78.6	146	13.8	26.5	
Surr: DNOP	0.44		0.5000		88.0	62.7	145	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R19392**	RunNo:	**19392**					
Prep Date:		Analysis Date:	**6/19/2014**	SeqNo:	**561077**	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		97.2	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R19392**	RunNo:	**19392**					
Prep Date:		Analysis Date:	**6/19/2014**	SeqNo:	**561078**	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	20		20.00		102	70.9	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R19361**	RunNo: **19361**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **559943** 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
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R19361**	RunNo: **19361**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **559943** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R19361**	RunNo: **19361**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **559947** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	21	1.0	20.00	0	103	80	120			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R19361**	RunNo: **19361**
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **559947** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	94.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **mb-13776**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **13776**	RunNo: **19399**
Prep Date: **6/19/2014**	Analysis Date: **6/19/2014**	SeqNo: **561284** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **mb-13776**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **13776**	RunNo: **19399**
Prep Date: **6/19/2014**	Analysis Date: **6/19/2014**	SeqNo: **561284** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		61.8	12.1	85.8			
Surr: Phenol-d5	100		200.0		51.8	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		77.2	26	138			
Surr: Nitrobenzene-d5	92		100.0		92.1	47.5	119			
Surr: 2-Fluorobiphenyl	84		100.0		83.6	48.1	106			
Surr: 4-Terphenyl-d14	95		100.0		95.5	44	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID **lcs-13776**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **13776**	RunNo: **19399**
Prep Date: **6/19/2014**	Analysis Date: **6/19/2014**	SeqNo: **561285** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	83.8	50.3	109			
4-Chloro-3-methylphenol	180	10	200.0	0	89.2	51.2	113			
2-Chlorophenol	150	10	200.0	0	77.1	48.5	104			
1,4-Dichlorobenzene	66	10	100.0	0	65.8	39.5	106			
2,4-Dinitrotoluene	80	10	100.0	0	80.2	45.4	107			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.4	50.4	119			
4-Nitrophenol	110	10	200.0	0	52.8	15.5	62.2			
Pentachlorophenol	140	20	200.0	0	69.4	23.5	93.5			
Phenol	93	10	200.0	0	46.7	26.8	65.6			
Pyrene	100	10	100.0	0	103	54.4	108			
1,2,4-Trichlorobenzene	65	10	100.0	0	65.4	39.9	106			
Surr: 2-Fluorophenol	100		200.0		51.3	12.1	85.8			
Surr: Phenol-d5	88		200.0		44.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		75.6	26	138			
Surr: Nitrobenzene-d5	81		100.0		80.6	47.5	119			
Surr: 2-Fluorobiphenyl	84		100.0		84.1	48.1	106			
Surr: 4-Terphenyl-d14	87		100.0		87.0	44	113			

Sample ID **lcsd-13776**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **13776**	RunNo: **19399**
Prep Date: **6/19/2014**	Analysis Date: **6/19/2014**	SeqNo: **561286** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	94	10	100.0	0	93.7	50.3	109	11.1	27.2	
4-Chloro-3-methylphenol	220	10	200.0	0	108	51.2	113	19.0	25.9	
2-Chlorophenol	190	10	200.0	0	95.2	48.5	104	21.0	22.5	
1,4-Dichlorobenzene	85	10	100.0	0	85.3	39.5	106	25.9	24.6	R
2,4-Dinitrotoluene	97	10	100.0	0	97.0	45.4	107	19.0	25.3	
N-Nitrosodi-n-propylamine	94	10	100.0	0	94.0	50.4	119	16.8	23.6	
4-Nitrophenol	140	10	200.0	0	67.5	15.5	62.2	24.6	34.7	S
Pentachlorophenol	150	20	200.0	0	76.8	23.5	93.5	10.2	32.8	
Phenol	110	10	200.0	0	57.3	26.8	65.6	20.4	25.5	
Pyrene	120	10	100.0	0	115	54.4	108	11.7	31.4	S
1,2,4-Trichlorobenzene	81	10	100.0	0	80.8	39.9	106	21.0	25.9	
Surr: 2-Fluorophenol	130		200.0		63.8	12.1	85.8	0	0	
Surr: Phenol-d5	110		200.0		56.8	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	190		200.0		93.6	26	138	0	0	
Surr: Nitrobenzene-d5	100		100.0		103	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	93		100.0		93.0	48.1	106	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**

09-Jul-14

Client: Western Refining Southwest, Gallup

Project: 2014 2nd Quarter

Sample ID	**lcsd-13776**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSS02**	Batch ID:	**13776**		RunNo:	**19399**					
Prep Date:	**6/19/2014**	Analysis Date:	**6/19/2014**		SeqNo:	**561286**	Units:	**µg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14		110		100.0		107	44	113	0	0	

Qualifiers:

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

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: 1406811 RcptNo: 1

Received by/date: CS 06/17/14

Logged By: **Celina Sessa** 6/17/2014 4:14:00 PM Celina Sessa

Completed By: **Celina Sessa** 6/17/2014 5:07:26 PM Celina Sessa

Reviewed By: 06/18/14

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☑	CS 06/18/14
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 ☑	CS 06/18/14
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 ☐	

Metals analysis: Added 0.4 ml HNO_3 to -001G for an acceptable pH. Held in login for 24 hours. CS 06/18/14

# of preserved bottles checked for pH: 36 (<2 or >12 unless noted)

Adjusted? Yes

Checked by: CS

Special Handling (if applicable)

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

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. **Cooler Information**

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

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 2ND QUARTER

MKTF-16 / MKTF-17 / STP-1NW

Project Manager:

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

Sampler: C. JOHNSON/K. SANCHEZ

On Ice: X Yes ☐ No

Sample Temperature: 1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1406811	8260+MTBE	8015B EXTENDED	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	Air Bubbles (Y or N)
6/16/2014	1000	H20	STP-1NW	MISC	MISC	-001	X	X	X	X	X	X	
6/16/2014	1105	H20	MKTF-17	MISC	MISC	-002			X	X	X	X	
6/16/2014	1120	H20	MKTF-16	1-L AMBER	NONE	-003			X				

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/17/14	0900			6-17-14	2:00
Date:	Time:	Relinquished by:	Received by:	Date	Time
6-17-14	414			06/17/14	16:14

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

October 06, 2014

Cheryl Johnson

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

RE: 2014 Annual GW OrderNo.: 1409802

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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: West LDU
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:45:00 AM
Lab ID: 1409802-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **BCN**	
Diesel Range Organics (DRO)	6.6	1.0		mg/L	1	9/18/2014 12:45:21 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 12:45:21 PM	15312
Surr: DNOP	95.3	59-141		%REC	1	9/18/2014 12:45:21 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	6.7	2.5		mg/L	50	9/17/2014 12:59:36 PM	R21267
Surr: BFB	86.9	70.9-130		%REC	50	9/17/2014 12:59:36 PM	R21267
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	9/17/2014 12:59:36 PM	R21267
Benzene	870	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Toluene	300	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Ethylbenzene	110	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Xylenes, Total	940	100		µg/L	50	9/17/2014 12:59:36 PM	R21267
1,2,4-Trimethylbenzene	410	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
1,3,5-Trimethylbenzene	150	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Surr: 4-Bromofluorobenzene	99.4	66.6-167		%REC	50	9/17/2014 12:59:36 PM	R21267
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JLF**	
Barium	0.49	0.0020		mg/L	1	9/19/2014 4:13:31 PM	R21336
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:37:26 PM	R21290
Chromium	0.27	0.0060	*	mg/L	1	9/18/2014 1:37:26 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:37:26 PM	R21290
Iron	1.3	0.10	*	mg/L	5	9/19/2014 4:21:51 PM	R21336
Manganese	0.64	0.010	*	mg/L	5	9/19/2014 4:21:51 PM	R21336
Silver	ND	0.0050		mg/L	1	9/24/2014 12:27:29 PM	R21433
Zinc	0.26	0.010		mg/L	1	9/19/2014 4:13:31 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Barium	0.52	0.0020		mg/L	1	9/18/2014 4:30:15 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:30:15 PM	15343
Chromium	0.28	0.0060	*	mg/L	1	9/18/2014 4:30:15 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:30:15 PM	15343
Iron	5.1	0.20	*	mg/L	10	9/18/2014 5:12:40 PM	15343
Manganese	0.73	0.0020	*	mg/L	1	9/18/2014 4:30:15 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:30:15 PM	15343
Zinc	0.57	0.010		mg/L	1	9/18/2014 4:30:15 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Arsenic	ND	0.0050		mg/L	5	9/26/2014 1:52:28 PM	R21493
Lead	ND	0.010		mg/L	10	9/29/2014 4:31:26 PM	R21527
Selenium	ND	0.0050		mg/L	5	9/26/2014 1:52:28 PM	R21493

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: West LDU
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:45:00 AM
Lab ID: 1409802-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBD**	
Uranium	ND	0.010		mg/L	10	9/29/2014 4:31:26 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst: **DBD**	
Arsenic	0.0031	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
Lead	0.0013	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
Selenium	0.0034	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
Uranium	ND	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
EPA METHOD 245.1: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:40:56 AM	15449

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 6-9/11/14
Project: 2014 Annual GW
Collection Date: 9/11/2014 12:10:00 PM
Lab ID: 1409802-002 **Matrix:** AQUEOUS **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/17/2014 3:59:46 PM	R21267
Benzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Xylenes, Total	ND	2.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Surr: 4-Bromofluorobenzene	111	66.6-167		%REC	1	9/17/2014 3:59:46 PM	R21267

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 5-9/11/14
Project: 2014 Annual GW
Collection Date: 9/11/2014 12:10:00 PM
Lab ID: 1409802-003 **Matrix:** AQUEOUS **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/17/2014 4:29:59 PM	R21267
Benzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Xylenes, Total	ND	2.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Surr: 4-Bromofluorobenzene	105	66.6-167		%REC	1	9/17/2014 4:29:59 PM	R21267

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409802-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 5:00:08 PM	R21267
Surr: BFB	87.7	70.9-130		%REC	1	9/17/2014 5:00:08 PM	R21267
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/17/2014 5:00:08 PM	R21267
Benzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Xylenes, Total	ND	2.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Surr: 4-Bromofluorobenzene	95.4	66.6-167		%REC	1	9/17/2014 5:00:08 PM	R21267

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621146**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621147**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621149**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621150**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			

Sample ID	**LCS TEST**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621170**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**1409802-001CMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**West LDU**	Batch ID:	**R21290**		RunNo:	**21290**				
Prep Date:		Analysis Date:	**9/18/2014**		SeqNo:	**621174**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.47	0.0020	0.5000	0	93.8	70	130			
Chromium	0.76	0.0060	0.5000	0.2657	98.8	70	130			
Copper	0.45	0.0060	0.5000	0	90.1	70	130			

Sample ID	**1409802-001CMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**West LDU**	Batch ID:	**R21290**		RunNo:	**21290**				
Prep Date:		Analysis Date:	**9/18/2014**		SeqNo:	**621175**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.53	0.0020	0.5000	0	105	70	130	11.5	20	
Chromium	0.78	0.0060	0.5000	0.2657	103	70	130	2.47	20	
Copper	0.46	0.0060	0.5000	0	91.5	70	130	1.47	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**R21336**		RunNo:	**21336**				
Prep Date:		Analysis Date:	**9/19/2014**		SeqNo:	**622776**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**R21336**		RunNo:	**21336**				
Prep Date:		Analysis Date:	**9/19/2014**		SeqNo:	**622777**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.9	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**R21336**		RunNo:	**21336**				
Prep Date:		Analysis Date:	**9/19/2014**		SeqNo:	**622779**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID **1409802-001CMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.94	0.0020	0.5000	0.4895	89.4	70	130			
Zinc	0.66	0.010	0.5000	0.2649	78.0	70	130			

Sample ID **1409802-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.94	0.0020	0.5000	0.4895	89.5	70	130	0.0598	20	
Zinc	0.65	0.010	0.5000	0.2649	77.2	70	130	0.655	20	

Sample ID **1409802-001CMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.6	0.10	2.500	1.328	91.7	70	130			
Manganese	2.9	0.010	2.500	0.6426	89.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**1409802-001CMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**West LDU**	Batch ID:	**R21336**		RunNo:	**21336**				
Prep Date:		Analysis Date:	**9/19/2014**		SeqNo:	**622818**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.7	0.10	2.500	1.328	93.8	70	130	1.48	20	
Manganese	3.0	0.010	2.500	0.6426	92.6	70	130	2.72	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**R21433**		RunNo:	**21433**				
Prep Date:		Analysis Date:	**9/24/2014**		SeqNo:	**626248**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**R21433**		RunNo:	**21433**				
Prep Date:		Analysis Date:	**9/24/2014**		SeqNo:	**626249**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.097	0.0050	0.1000	0	97.0	85	115			

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

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**R21433**		RunNo:	**21433**				
Prep Date:		Analysis Date:	**9/24/2014**		SeqNo:	**626253**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB-15343**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **15343**	RunNo: **21297**
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621503** 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-15343**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **15343**	RunNo: **21297**
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.9	85	115			

Sample ID **LCS Ag-15343**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **15343**	RunNo: **21297**
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628610** Units: **mg/L**

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

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21493**	RunNo: **21493**
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628611** Units: **mg/L**

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

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629895** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629896** Units: **mg/L**

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

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629897** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LLLCS-15343**	SampType: **LCSLL**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **15343**		RunNo: **21376**					
Prep Date:	**9/17/2014**	Analysis Date: **9/23/2014**		SeqNo: **624955**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID	**MB-15343**	SampType: **MBLK**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **15343**		RunNo: **21376**					
Prep Date:	**9/17/2014**	Analysis Date: **9/23/2014**		SeqNo: **624958**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**15449**	RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625480**	Units:	**mg/L**			

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

Sample ID	**LCS-15449**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**15449**	RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625481**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **MB-15312**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW**	Batch ID: **15312**	RunNo: **21248**
Prep Date: **9/16/2014**	Analysis Date: **9/17/2014**	SeqNo: **619740** 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	0.99		1.000		99.1	59	141			

Sample ID **LCS-15312**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW**	Batch ID: **15312**	RunNo: **21248**
Prep Date: **9/16/2014**	Analysis Date: **9/17/2014**	SeqNo: **619860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	69.7	142			
Surr: DNOP	0.49		0.5000		98.9	59	141			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.0	70.9	130			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	80	120			
Surr: BFB	19		20.00		93.9	70.9	130			

Sample ID **1409802-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **West LDU**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	2.5	25.00	6.680	98.7	70.4	127			
Surr: BFB	1100		1000		107	70.9	130			

Sample ID **1409802-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **West LDU**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	2.5	25.00	6.680	96.2	70.4	127	2.06	20	
Surr: BFB	1100		1000		107	70.9	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		104	66.6	167			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620424** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	86.3	67.4	147			
Benzene	19	1.0	20.00	0	97.0	80	120			
Toluene	20	1.0	20.00	0	98.3	80	120			
Ethylbenzene	20	1.0	20.00	0	98.1	80	120			
Xylenes, Total	61	2.0	60.00	0	102	80	120			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	102	80	120			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		95.8	66.6	167			

Sample ID **1409802-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **West LDU**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620428** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	820	120	1000	0	81.8	45.4	143			
Benzene	1900	50	1000	867.5	107	80	120			
Toluene	1400	50	1000	298.5	108	80	120			
Ethylbenzene	1200	50	1000	109.4	105	79.7	126			
Xylenes, Total	4100	100	3000	937.4	107	80	120			
1,2,4-Trimethylbenzene	1500	50	1000	409.6	106	80.3	122			
1,3,5-Trimethylbenzene	1200	50	1000	145.9	107	80	120			
Surr: 4-Bromofluorobenzene	1200		1000		124	66.6	167			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**

06-Oct-14

Client: Western Refining Southwest, Gallup

Project: 2014 Annual GW

Sample ID **1409802-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **West LDU**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620429** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	790	120	1000	0	78.6	45.4	143	4.03	20	
Benzene	1800	50	1000	867.5	94.1	80	120	6.98	20	
Toluene	1300	50	1000	298.5	98.1	80	120	7.70	20	
Ethylbenzene	1100	50	1000	109.4	99.7	79.7	126	4.27	20	
Xylenes, Total	4000	100	3000	937.4	101	80	120	4.33	20	
1,2,4-Trimethylbenzene	1400	50	1000	409.6	103	80.3	122	1.47	20	
1,3,5-Trimethylbenzene	1200	50	1000	145.9	102	80	120	4.17	20	
Surr: 4-Bromofluorobenzene	1200		1000		122	66.6	167	0	0	

Qualifiers:

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

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: **1409802** RcptNo: **1**

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 7:58:21 AM** AG

Reviewed By: AT 09/17/14

Chain of Custody

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

Special Handling (if applicable)

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

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 GW 09/17/14

~~2041~~ ANNUAL GW

Project #:

East/West/Oil Sump LDUs

Project Manager:

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

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409802	Analysis Request: 8021 + MTBE	8015B extended	WQCC Metals - Total	WQCC Metals - Dissolved, Filtered	Air Bubbles (Y or N)
9/11/14	0945	H_2O	West LDU			-001	X	X	X	X	
9/11/14	1200	H_2O	FB-Group6-9/11/14			-002	X				
9/11/14	1210	H_2O	FB-Group5-9/11/14			-003	X				
			Trip Blank			-004	X	X			
			AT 09/17/14								

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9/16/14	1450
9-16-14	1703			09/16/14	1703

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.